

37th Panhellenic Conference on Solid State Physics & Materials Science

PROGRAM

Sunday 17 September 2023



XXXVII
Panhellenic Conference on
Solid State Physics & Materials Science
17-20 September 2023 Thessaloniki | Greece

13:00-18:00	Registration
14:30-17:40 🏠 AMF2	SU1: Tutorial Satellite Event “J. Stoemenos”: Modern advances and capacities of Electron Nanoscopy for materials characterization Chair: G. Dimitrakopoulos
14:30-14:40 WELCOME	Opening remarks - Presentation of the Nanoscopy-GR network G. Dimitrakopoulos , <i>Conference Chairman</i>
14:40-15:00	Structural characterization by high resolution transmission electron microscopy Ph. Komninou <i>Physics Dept., Aristotle University of Thessaloniki, Greece</i>
15:00-15:20	(Scanning) Transmission Electron Microscopy in applied research N. Boukos <i>Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens, Greece</i>
15:20-15:40	STEM-EELS: from basics to single atom spectroscopy F. S. Hage <i>Physics Dept., Centre for Materials Science and Nanotechnology, University of Oslo, Norway</i>
15:40-16:00	Energy-dispersive X-ray mapping in SEM and STEM T. Walther <i>Dept. of Electronic & Electrical Engn., University of Sheffield, Sheffield S1 3JD, UK</i>
16:00-16:30	Coffee Break
16:30-16:50	Unveiling Nanoscale imaging: A Methodological Approach for Quantitative High-Resolution (S)TEM Analysis of Complex Nanostructures I. Vasileiadis <i>Physics Dept., Aristotle University of Thessaloniki, Greece</i>
16:50-17:10	Resolution enhancement of Scanning Electron/Atomic Force Microscope images using a computational method based on Fourier spectra stitching E. Stai ^{1,2} , V. Constantoudis ^{1,3} , A. Kaidatzis ¹ , E. Gogolides ^{1,3} ¹ <i>Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Greece;</i> ² <i>Dept. of Physics, National and Kapodistrian University of Athens, Greece;</i> ³ <i>Nanometrisis p.c, Attiki 15310, Greece</i>
17:10-17:30	Studying the microstructure in composite building materials E. Pavlidou ¹ , Th. Koltso ² , M. Stefanidou ³ ¹ <i>Solid State Section, Physics Dept., AUTH;</i> ² <i>Dept. of Geology, AUTH;</i> ³ <i>School of Civil Engineering, AUTH, Greece</i>
18:00	SU2: Opening Ceremony
18:00-18:15	Welcome & Opening Remarks G. Dimitrakopoulos , <i>Conference Chairman</i>
18:15-19:15 PLENARY	Advanced synchrotron techniques for functional materials A. Rogalev , F. Wilhelm <i>The European Synchrotron, Grenoble, France</i>
19:30	WELCOME RECEPTION

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08:00	Registration		
09:30-11:00 🏠 AMF2	MO1: Joined Session: Organic & inorganic semiconductors & Low dimensional materials Chair: Ph. Komninou		
09:00-09:40 KEYNOTE	Molecular beam epitaxy of III-V semiconductors in Greece: From III-Arsenides to III-Nitrides A. Georgakilas <i>Microelectronics Research Group (MRG), Dept. of Physics, University of Crete, Greece; Institute of Electronic Structure and Laser (IESL), FORTH, Heraklion, Greece</i>		
09:40-10:05 INVITED	III-V semiconductor nanowires with unique heterostructure possibilities D. Hilliard ^{1,2} , L. Balaghi ^{1,2} , T. Tauchnitz ^{1,2} , R. Hübner, ¹ I. Fotev ^{1,2} , R. Rana ¹ , A. Pashkin ¹ , I. Vasileiadis ³ , P. Chatzopoulou ³ , N. Florini ³ , G. P. Dimitrakopoulos ³ , P. Komninou ³ , S. Winnerl ¹ , H. Schneider ¹ , M. Helm ^{1,2} , E. Dimakis ¹ <i>¹ Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden, Germany; ² Center for Advancing Electronics Dresden (cfaed), Technische Universität Dresden, Germany; ³ Aristotle University of Thessaloniki, Greece</i>		
10:05-10:20	Comprehensive analysis of the photoactivation trend in printed Organic Solar Cells utilizing novel polymer: NFA system V. Heben ¹ , C. Kapnopoulos ¹ , A. Zachariadis ¹ , D. Tselekidou ¹ , E. Mekeridis ² , A. Laskarakis ¹ , S. Logothetidis ^{1,2} <i>¹ Lab for Thin Films - Nanobiomaterials - Nanosystems & Nanometrology (LTFN), Dept. of Physics, Aristotle University of Thessaloniki, Greece; ² Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, Thermi, Greece</i>		
10:20-10:35	Simplified and Cost-Effective Techniques for Chemical Vapor Deposition Growth of Large-area 2D Transition Metal Dichalcogenides and their Heterostructures D. Maratos ¹ , N. Balakeras ¹ , A. Michail ^{2,3} , K. Filintoglou ⁴ , K. Papagelis ^{1,2} , J. Parthenios ² <i>¹ School of Physics, Dept. of Solid-State Physics, Aristotle University of Thessaloniki, Greece; ² Institute of Chemical Engineering Sciences, FORTH/ICEHT, Patras, Greece; ³ Dept. of Physics, University of Patras, Patras, Greece; ⁴ HENANOTEC, Thessaloniki</i>		
10:35-10:50	Exploring the optical near-field interaction of Mie nanoresonators with a monolayer semiconductor D. Katrisiotti ^{1,2} , P. R. Wiecha ³ , G. Larrieu ³ , J. Müller ³ , J.-M. Poumirol ⁴ , A. Cuche ⁴ , G. Agez ⁴ , V. Paillard ⁴ , X. Marie ⁵ , B. Urbaszek ⁶ , E. Stratakis ^{1,7} , G. Kioseoglou ^{1,2} , I. Paradisanos ^{1,5} <i>¹ Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), Crete, Greece; ² Dept. of Materials Science and Technology, University of Crete, Greece; ³ LAAS-CNRS, Université de Toulouse, France; ⁴ CEMES-CNRS, Université de Toulouse, Toulouse, France; ⁵ Université de Toulouse, INSA-CNRS-UPS, LPCNO, France; ⁶ Institute of Cond. Matter Physics, Technische Universität Darmstadt, Germany; ⁷ Dept. of Physics, University of Crete, Greece</i>		
10:50-11:05	Surface kinetics mechanisms in RF-MBE epitaxy of InGaN alloys: The relative role of adsorption and decomposition concerning the entire ternary range L. Lymperakis ^{1,2} , E. Iliopoulos ^{1,2} <i>¹ Dept. of Physics, University of Crete, Greece; ² Institute of Electronic Structure and Lasers, FORTH, Greece</i>		
11:00-11:40	Coffee Break		
11:40-13:35 🏠 AMF2	MO2: Nanoscopy, nanostructure and nanomechanics Chair: Th. Karakostas	11:40-13:45 🏠 AMF3	MO3: Magnetism & strongly correlated systems Chair: M. Angelakeris
11:40-12:05 INVITED	Procedures for improved quantitative energy-dispersive X-ray spectroscopy in transmission electron microscopes T. Walther <i>Dept. of Electronic & Electrical Engn., University of Sheffield, Sheffield S1 3JD, UK</i>	11:40-12:05 INVITED	Sustainable Design of New Permanent magnets P. Maltoni ¹ , G. Varvaro ² , G. Barucca ³ , R. Mathieu ¹ , D. Peddis ^{2,4} <i>¹ Dept. of Materials Science and Engineering, Uppsala University, Sweden; ² Institute of Structure of Matter, CNR, Roma, Italy; ³ Dept. SIMAU, University Politecnica delle Marche, Ancona, Italy; ⁴ Dept. of Chemistry and Industrial Chemistry & INSTM, Univ. Genova, Italy</i>

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12:05-12:20	Nanoscale 3D Strain Mapping and Structural Features of GaAs/In(AI,Ga)As Core-Shell Nanowires P. Chatzopoulou¹ , D. Hilliard ² , I. G. Vasileiadis ¹ , N. Florini ¹ , V. Devulapalli ³ , C. H. Liebscher ³ , L. Lymperekis ⁴ , Ph. Komninou ¹ , E. Dimakis ² , G. P. Dimitrakopoulos ¹ ¹ <i>Physics Dept., Aristotle University of Thessaloniki, Greece</i> ² <i>Helmholtz-Zentrum Dresden, Germany</i> ³ <i>Max-Planck Institut für Eisenforschung GmbH, Düsseldorf, Germany</i> ⁴ <i>Dept. of Physics, University of Crete, Greece</i>	12:05-12:20	The rare-earths supply issue and possible alternatives for permanent magnets development C. Sarafidis <i>Physics Dept., Aristotle University of Thessaloniki, Greece</i>
12:20-12:35	Structure refinement by electron based spectroscopies: the case of electron channeling in advanced thermoelectrics A. Delimitis <i>Dept. of Mechanical and Structural Engineering and Materials Science, University of Stavanger, Norway</i>	12:20-12:35	Novel Fe-Co Nanoalloy Phases Grown on Nanodiamonds: Insights from ⁵⁷Fe Mossbauer spectroscopy P. G. Ziogas , A. B. Bourlinos, A. P. Douvalis <i>Physics Dept., University of Ioannina, Greece</i>
12:35-12:50	Point defects in liquid-phase exfoliated PtSe₂: A complementary aberration-corrected STEM and ab-initio study I.M. Oikonomou^{1,2,3} , D. Douglas-Henry ^{1,2} , T. Brumme ³ , Z. Sofer ⁴ , T. Heine ^{3,5} , V. Nicolosi ^{1,2} ¹ <i>Advanced Microscopy Laboratory, CRANN and AMBER, Dublin, Ireland</i> ² <i>Trinity College Dublin, School of Chemistry, Dublin, Ireland</i> ³ <i>TU Dresden, Chair of Theoretical Chemistry, Dresden, Germany</i> ⁴ <i>University of Chemistry & Techn. Prague, Dept. Inorganic Chem., Czech Republic,</i> ⁵ <i>Helmholtz Zentrum Dresden-Ross., Institute of Resource Ecology, Leipzig, Germany</i>	12:35-12:50	THz emission from Fe/Pt spintronic emitters with L10-FePt alloyed interface L. Scheuer¹ , L. Franke ² , D. Karfaridis ³ , I. Vasileiadis ³ , B. Hillebrands ¹ , M. Rahm ² , T. Kehagias ³ , G. Vourlias ³ , R. Beigang ¹ , E. Th. Papaioannou ^{3,4} ¹ <i>Fachbereich Physik, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Germany</i> ² <i>Fachbereich Elektro-Informationstechnik, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Germany</i> ³ <i>Dept. of Physics, Aristotle University of Thessaloniki, Greece</i> ⁴ <i>Institute of Physics, Martin-Luther University Halle-Wittenberg, Germany</i>
12:50-13:05	Nanoscale analysis of superconducting Al epitaxial thin films on sapphire substrate N. Florini¹ , P. Chatzopoulou ¹ , G. P. Dimitrakopoulos ¹ , A. Adikimenakis ² , Z. Hatzopoulos ² , G. Konstantinidis ² , Th. Kehagias ¹ , Ph. Komninou ¹ ¹ <i>Physics Dept., Aristotle University of Thessaloniki, Greece</i> ² <i>Microelectronics Research Group, Institute of Electronics Structure and Laser, Foundation for Research and Technology Hellas, Crete, Greece</i>	12:50-13:05	Resonances and Microwave Assisted Switching Mechanisms in two-phase Nanowires C. Thanos, I. Panagiotopoulos¹ <i>Dept. of Materials Science and Engineering University of Ioannina, Greece</i>
13:05-13:20	Surface driven effects in spinel iron oxide nanoparticles G. Muscas ¹ , F. Congiu ¹ , G. Concas ¹ , C. Cannas ² , V. Mameli ² , N. Yaacoub ³ , R. Sayed Hassan ^{3,4} , D. Fiorani ⁶ , S. Slimani^{5,6} , D. Peddis ^{5,6} . ¹ <i>Dept. Physics, University of Cagliari, Cittadella Universitaria Di Monserrato, Italy</i> ² <i>Università Degli Studi Di Cagliari, Dipartimento Di Scienze Chimiche E Geologiche, and INSTM, Cittadella Universitaria Di Monserrato, Italy</i> ³ <i>IMMM, Le Mans Université, CNRS UMR, Le Mans, France</i> ⁴ <i>Dept. of Physics, Faculty of Science, Lebanese University, Lebanon</i> ⁵ <i>Dipartimento Di Chimica E Chimica Industriale, Un. Degli Studi Di Genova, Italy</i> ⁶ <i>Istituto Di Struttura Della Materia-CNR, ⁰⁰⁰¹⁵ Monterotondo Scalo, RM, Italy</i>	13:05-13:20	Magnetically recoverable nanoparticles for the removal of hexavalent chromium from water: Simulating the separation route N. Maniotis^{1,2} , K. Kalaitzidou ¹ , E. Asimoulas ¹ , K. Simeonidis ¹ ¹ <i>Analytical Chemistry Laboratory, Dept. of Chemical Engineering, Aristotle University of Thessaloniki, Greece</i> ² <i>MagnaCharta, Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, Greece</i>
13:20-13:35	Ultrafast Nanoscale Coherent XUV Diffraction Imaging S. Petrakis ^{1,2} , A. Skoulakis ¹ , V. Dimitriou ¹ , M. Bakarezos ¹ , M. Tatarakis ¹ , E. P. Benis ² , N.A. Papadogiannis¹	13:20-13:45 INVITED	Multilayers with ultrathin oxide layers P. Pouloupoulos <i>Materials Science Dept., University of Patras, Greece</i>

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¹ Institute of Plasma Physics and Lasers, Hellenic Mediterranean University, Greece

² Dept. of Physics, University of Ioannina, Ioannina, Greece

13:30-14:45 Lunch Break / Exhibition – Networking – Posters

14:45-16:25 AMF2	MO4: Materials for energy & sustainability Chair: A. Laskarakis	14:45-16:15 AMF3	MO5: Computational materials science Chair: E. Lidorikis
14:45-15:10 INVITED	Polymeric materials for energy applications: diversity and structure – property relations A. K. Andreopoulou ^{1,2} ¹ Dept. of Chemistry, University of Patras, Patras, Greece; ² Foundation for Research and Technology Hellas/Institute of Chemical Engineering Sciences (FORTH/ICE-HT), Greece	14:45-15:00	Novel superfluid states of rotating quantum droplets S. Nikolaou ¹ , G. M. Kavoulakis ^{1,2} , M. Ögren ^{2,3} ¹ Hellenic Mediterranean University, P.O. Box 1939, GR-71004, Heraklion, Greece ² HMU Research Center, Institute of Emerging Technologies, Heraklion, Greece ³ School of Science and Technology, Örebro University, 70182 Örebro, Sweden
15:10-15:25	Investigation of the Impact of Chlorine Incorporation on the Structure and Stability of Flexible Printed Perovskite Solar Cells based on MAPbI₃ C. Stavragi ¹ , C. Kapnopoulos ² , A. Zachariadis ¹ , S. Kassavetis ¹ , A. Paliagkas ¹ , V. Heben ¹ , C. Gravalidis ¹ , E. Mekeridis ² , S. Logothetidis ^{1,2} , A. Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Physics Dept., Aristotle University of Thessaloniki, Greece ² Organic Electronic Technologies P.C. (OET), 20km Thessaloniki Tagarades, Greece	15:00-15:15	Optical Properties of Cu, Ag and Au nanoparticles with different sizes and shapes F.I. Michos ¹ , A.G. Chronis ¹ , C.S. Garoufalis ¹ , M.M. Sigalas ¹ ¹ Dept. of Materials Science, University of Patras, GR-26504, Patras, Greece
15:25-15:40	Electrodeposited Ta₂O₅-PANI PANI Nanocomposite Films on Ta for Supercapacitor Applications C. Gkili ¹ , K. Deligiannakis ¹ , C. Papoulia ² , E. Pavlidou ² , D. Sazou ¹ ¹ Dept. of Chemistry, Aristotle University of Thessaloniki, Greece ² Dept. of Physics, Aristotle University of Thessaloniki, Greece	15:15-15:30	Formation and properties of nanopipes and V-pits in and on GaN polar surfaces L. Lymperakis ^{1,2,3} , Su-Hyun ^{3,4} Yoo, J. Neugebauer ³ ¹ Dept. of Physics, University of Crete, Heraklion, Greece; ² Institute of Electronic Structure and Lasers (IESL)-FO.R.T.H., Greece; ³ Computational Materials Design Dept., Max-Planck Institut für Eisenforschung GmbH, Düsseldorf, Germany ⁴ Dept. of Materials, Imperial College London, United Kingdom
15:40-15:55	Plasmonic-photonic Ag/Au-MoS₂-TiO₂ films for visible light-activated photo(electro)catalysis S. Loukopoulos ¹ , E. Sakelis ² , S. Gardelis ¹ , V. Likodimos ¹ ¹ Section of Cond. Matter Physics, Dept. of Physics, National and Kapodistrian University of Athens, Greece ² Institute of Nanoscience and Nanotechnology, National Center for Scientific Research “Demokritos”, Greece	15:30-15:45	Properties of Complex Alumina/Polymer Interfaces via a Multi-Scale Computational Methodology N. Patsalidis , G. Papamokos, G. Floudas ^{2,3} , V. Harmandaris ^{1,4,5} ¹ Computation-based Science & Technology Research Center, Cyprus Institute, Cyprus ² Dept. of Physics, University of Ioannina, Greece ³ Univ. Research Center of Ioannina, Inst Materials Science and Computing, Greece ⁴ Dept. of Mathematics and Applied Mathematics, University of Crete, Greece ⁵ Institute of Applied and Computational Mathematics, IACM-FORTH, Greece
15:55-16:10	MXene scrolls: A vanadium carbide (V₂C) papyrus-like structure for energy applications Y. Georgantas ¹ , F. Moissinac ¹ , S. Haigh ¹ , M. Bissett ¹ University of Manchester, Dept. of Materials, Henry Royce Institute, National Graphene Institute, Manchester, UK	15:45-16:00	Machine Learning Interatomic Potentials for Atomistic Simulations of Pharmaceuticals N. Kyriakopoulos ¹ , E. Nikidis ¹ , R. Tohid ² , G. Nikoulis ¹ , K. Kachrimanis ³ , H. Kaiser ² , J. Kioseoglou ¹ ¹ School of Physics, Dept. of Cond. Matter and Materials Physics, Aristotle University of Thessaloniki, Greece; ² Center of Computation and Technology, Louisiana State

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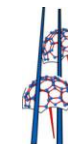
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			University, USA; ³ Lab Pharmaceutical Technology, School of Pharmacy, Aristotle University of Thessaloniki, Greece
16:10-16:25	Study of electrodeposited lithium battery cathode LCO M. Mebarki ¹ , A. Larabi ¹ , N. Gabouze ¹ , F. Hadji ² , A. Azizi ³ , K. Daïdeche ³ , S. Ouhenia ⁴ ¹ Centre de Recherche en Technologie des Semi-conducteurs pour l'Energétique (CRTSE), 2, Bd Frantz Fanon, BP 140 Alger 7-Merveilles 16038, Algeria. ² University of Biskra, Laboratory of Molecular Chemistry and Environment, Algeria ³ Laboratoire de Chimie, Ingénierie Moléculaire et Nanostructures, Université Ferhat Abbas, Algeria ⁴ Département de Physique, Université Abderrahmane, Algeria	16:00-16:15	Atomistic Force field for 2D Hexagonal Boron Nitride Membranes Derived from First Principles' Calculations M. Arapchatzis ¹ , A. P. Sgouros ² , G. Kalosakas ⁴ , N. N. Lathiotakis ³ , K. Papagelis ^{1,5} ¹ Physics Dept., Aristotle University of Thessaloniki, Greece; ² School of Chemical Engineering, National Technical University of Athens, Greece; ³ Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece ⁴ Dept. of Materials Science, University of Patras, Greece; ⁵ Institute of Chemical Engineering Sciences, FORTH/ICE-HT, Patras, Greece
16:30-17:00	Coffee Break		
17:00-18:45 🏠 AMF2	MO6: Nanoscopy, Nanostructure and Nanomechanics Chair: Th. Kehagias	17:00-18:20 🏠 AMF3	MO7: Magnetism and Strongly Correlated Systems Chair: P. Pouloupoulos
17:00-17:25 INVITED	In situ and operando transmission electron microscopy: real time nanoscale insights into emerging materials for batteries C. Bazioti ¹ , S. Gorantla ² , S. Ravuri ² , P. S. Wrobel ² , M. F. Sunding ³ , S. Sartori ⁴ , S. Diplas ³ , A. Bachmatiuk ² , E. Gunnæs ¹ ¹ Dept. of Physics, Centre for Mat. Sc. Nanot., University of Oslo, Oslo, Norway ² Łukasiewicz Research Network, Polish Center for Technology Development, Poland ³ SINTEF Industry, Oslo, Norway; ⁴ Dept. of Technology Systems, University of Oslo, Norway	17:00-17:25 INVITED	Magnetic nanoparticles in viscous media under AC fields: from the <i>ns</i>-timescale single-particle heating to the <i>mins</i>-timescale colloid evolution D. Serantes ^{1,2} ¹ Applied Physics Dept., Universidade de Santiago de Compostela, Spain. ² iMATUS, Universidade de Santiago de Compostela, Spain.
17:25-17:40	Unveiling the Characteristics of Monolayer-thick InGaN/GaN Quantum Wells: An Integrated Analysis I. G. Vasileiadis ¹ , P. Chatzopoulou ¹ , L. Lymperakis ² , A. Adikimenakis ^{3,4} , A. Gkotinakos ¹ , V. Devulapalli ² , C. H. Liebscher ² , M. Androulidaki ^{3,4} , R. Hübner ⁵ , A. Georgakilas ^{3,4} , V. Pontikis ⁶ , Th. Karakostas ¹ , Ph. Komninou ¹ , E. Dimakis ⁵ , G. P. Dimitrakopoulos ¹ ¹ School of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece; ² Max-Planck Institut für Eisenforschung GmbH, Düsseldorf, Germany ³ Microelectronics Research Group (MRG), IESL, FORTH, Heraklion, Greece ⁴ Dept. of Physics, University of Crete, Heraklion, Greece ⁵ Institute of Ion Beam Physics & Materials Research, Helmholtz-Zentrum Dresden, Germany; ⁶ DRF/IRAMIS, Centre d'Etudes de Saclay, CEA, Université Paris-Saclay, France	17:25-17:40	Defect bearing hyper-expanded iron-chalcogenides and their robust superconducting state A. Deltsidis ^{1,2} , L. Simonelli ³ , G. Vailakis ^{1,2} , M. Kaitatzi ^{1,2} , G. Kopidakis ^{1,2} , A. Lappas ¹ ¹ Institute of Electronic Structure and Laser, FORTH, Greece ² Dept. of Materials Science and Technology, University of Crete, Greece ³ ALBA Synchrotron Light Source, Spain
17:40-17:55	Nanosopic studies of VO₂ thin films for smart windows applications A. Rai ¹ , A. Kuncser ² , V. Kuncser ² , C. Mihailescu ³ , A. Delimitis ¹	17:40-17:55	Optimization of the magnetic properties of smart ferrofluids by tuning the cluster-aggregation process M. Vasilakaki , K. Trohidou

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17:55-18:10	<p>Growth and study of ZnO/Cu₂O heterostructures S. Giamini¹, E. Sakellis¹, A. Travlos¹, H.J. Kim², N. Boukos¹ ¹ Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Attiki, Greece ² Korea Basic Science Institute, Daejeon, S. Korea</p>	17:55-18:10	<p>Resolving Interfacial Phenomena in Fe/Pt heteroepitaxy by Computational, Structural, and Magnetic Studies D. Karfaridis¹, S. Giaremis, T. Kehagias¹, J. Kioseoglou, E. Th. Papaioannou^{1,2}, G. Vourlias¹ ¹ Physics Dept., Aristotle University of Thessaloniki, Greece ² Institute of Physics, Martin Luther Univ., Germany</p>
18:10-18:25	<p>JEOL cutting edge products for time resolved microscopy & new detection systems G. Brunetti JEOL (EUROPE) SAS – Espace Claude Monet – 78290 Croissy-sur-Seine, France</p>	18:10-18:35 INVITED	<p>The effect of oleic acid coating variation on the magnetic properties of Co ferrite nanoparticles: A multiscale modeling study M. Vasilakaki, N. Ntallis, K. Trohidou Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Athens, Greece</p>
18:25-18:40	<p>Hydrocarbon (n-eicosane)-poly(ethylene oxide)/poly(methyl methacrylate) (PEO/PMMA) fibers used as phase change materials I. Chrysafi¹, K. Avraam², T. Krasia-Christoforou² ¹Laboratory of Advanced Materials and Devices, School of Physics, Aristotle University of Thessaloniki, Greece; ²Dept. of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia, 2109, Cyprus</p>		
18:30-20:00	POSTER SESSION 1 / Exhibition - Corporate presentations - Networking		

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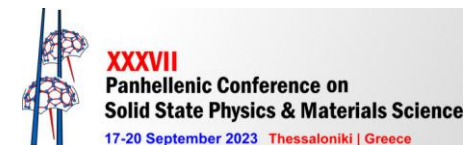
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09:00-11:00 🏠 AMF2	TU1: Biomaterials Chair: D. Serantes	09:00-11:10 🏠 AMF3	TU2: Organic & inorganic semiconductors, micro/nano-electronics, optoelectronics & photonics Chair: C. Tsamis
09:00-09:15	Advancements in Three Dimensional Bioceramic Scaffolds for Bone Tissue Engineering X. Chatzistavrou ^{1,2} ¹ Dept. of Chemical Engineering & Mat. Sc., Michigan State University, USA ² Dept. of Chemical Engineering, Aristotle University of Thessaloniki, Greece	09:00-09:25 INVITED	Resistive switching devices for memories and neuromorphic computing D. Tsoukalas , C. Tsiouostas, G. Klitsiotis, P. Bousoulas ¹ Dept. of Physics, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece
09:15-09:30	Synthesis and characterization of superparamagnetic nanoparticles for drug delivery G. Kastrinaki ^{1,2} , E. Gkagkari ^{1,2} , S. Papaioannou ¹ , A. Arkoumanis ² , G. Kouseris ² , C. Sarafidis ³ , O. Tsave ² , C. Chatzidoukas ² , V. Zaspalis ^{1,2} ¹ Chemical Process and Energy Resources Institute/CERTH, Themi, Thessaloniki ² Dept. of Chemical Engineering, AUTH, Thessaloniki; ³ Physics Dept., AUTH, Thessaloniki	09:25-09:40	Double-slot CMOS hybrid plasmonic waveguide-based Mach-Zehnder interferometric refractive index sensor M. Papadopoulou ^{1,2} , D. Chatzitheocharis ^{1,2} , K. Vyrsokinos ^{1,2} ¹ School of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece ² Center for Interdisciplinary Research and Innovation, Aristotle University of Thessaloniki, Greece
09:30-09:45	Combining 3D printing technology with magnetic nanoparticles to construct magnetic implants for biomedical applications A. Makridis ^{1,2} , N. Okkalidis ³ , A.T. Alexandridis ^{1,2} , K. Kazeli ^{1,2} , P. Kyriazopoulos ⁴ , D. Trygoniaris ^{1,2} , I. Genitseftsis ^{1,2} , A. Argyros ^{2,5} , N. Michailidis ^{2,5} , M. Angelakeris ^{1,2} ¹ Physics Dept., Aristotle University of Thessaloniki, Greece; ² Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Greece; ³ Morphé, Praxitelous 1, Thessaloniki, Greece; ⁴ Dept. of Mechanical Engineering, AUTH, Greece; ⁵ Physical Metallurgy Lab., Mech. Eng. Dept., School of Engineering, AUTH, Greece	09:40-09:55	Resistive Memories based on Silicon Nitride Dielectrics: from resistive filaments to applications N. Vasileiadis ^{1,2} , A. Mavropoulis ¹ , P. Normand ¹ , I. Karafyllidis ² , G. Ch. Sirakoulis ² , P. Dimitrakis ¹ ¹ Institute of Nanoscience and Nanotechnology NCSR "Demokritos", Athens, Greece ² Dept. of Electrical and Computer Engineering, Democritus University of Thrace, Xanthi, Greece
09:45-10:00	Doped Silica-based Mesoporous Nanoparticles for Local Drug Delivery G. K. Pouroutzidou ^{1,2} , K. Tsachouridis ³ , I. Tsamesidis ² , M. Bousnaki ² , A. Beketova ² , D. Gkiliopoulos ⁴ , G. Michailidou ⁴ , E. Deli ¹ , G. Vourlias ¹ , K. S. Triantafyllidis ⁴ , D. Bikiaris ⁴ , A. D. Anastasiou ³ , E. Kontonasaki ² ¹ Physics Dept., Aristotle University of Thessaloniki, Greece; ² School of Dentistry, Faculty of Health Sciences, AUTH, Greece; ³ Dept. of Chemical Engineering and Analytical Science, Univ. Manchester, UK ⁴ School of Chemistry, Faculty of Sciences, AUTH, Greece	09:55-10:10	Development of inkjet printed flexible and hybrid electrochemical biosensor for the detection of cardiac markers I.E. Chatziioannou ¹ , K. Papadopoulos ¹ , A. Batsi ¹ , C. Papoulia ² , P. Rampota ¹ , A. Orfanos ³ , V. Karagkiozaki ³ , S. Logotheitidis ^{1,3} , A. Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Dept. of Physics, Aristotle University of Thessaloniki, Greece ² ELMicLab, Dept. of Physics, Aristotle University of Thessaloniki, Greece ³ BL NanoBioMed, Greece
10:00-10:15	Interplay between diffusion and bond cleavage reaction for determining release times in polymer-drug conjugates G. Kalosakas ¹ ¹ Materials Science Dept., University of Patras, Rio GR-26504, Greece	10:10-10:25	Low Frequency Noise of Graphene Ribbon Devices with Interdigitated Electrodes G. Samara ^{1,2} , A. Mavropoulis ¹ , N. Vasileiadis ¹ , V. Ioannou-Souglideridis ¹ , P. Normand ¹ , K. Papagelis ² , P. Dimitrakis ¹ ¹ Institute of Nanoscience and Nanotechnology NCSR "Demokritos", Greece ² Dept. of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece
10:15-10:30	Investigation of Inlet Conditions in The Mixing Process of Nanoparticles and Blood in a T-Shaped Microfluidic Reactor with Small Rectangular Cavities	10:25-10:40	Dynamic modulation of nonlinearly generated light polarization with nanostructured graphene

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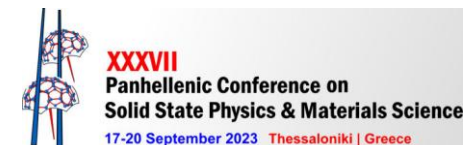


	<p>T. Karakasidis¹, S. Doukeridis², E. Karvelas¹, I. Sarris² ¹Cond. Matter Physics Laboratory, Dept. of Physics, University of Thessaly, Lamia, Greece; ²Dept. of Mechanical Engineering, University of West Attica, Aigaleo, Greece</p>		<p>N. Matthaiaakakis¹, S. Droulias², G. Kakarantzas¹ ¹Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Greece ²Dept. of Digital Systems, University of Piraeus, Greece</p>
10:30-10:45	<p>Synthesis and characterization of a novel multifunctional magnetic bioceramic nanocomposite K. Kazeli^{1,2}, Aiki Athanasiadou¹, A. Makridis¹, L. Malletzidou^{1,3}, G. Vourlias³, E. Kontonasaki⁴, E. Lymperaki², M. Angelakeris¹ ¹Dept. of Cond. Matter and Materials Physics, School of Physics, Aristotle University of Thessaloniki, Greece; ²Dept. of Biomedical Sciences, International Hellenic University, Greece; ³Laboratory of Advanced Materials and Devices, School of Physics, Aristotle University of Thessaloniki, Greece; ⁴Dept. of Prosthodontics, School of Dentistry, Aristotle University of Thessaloniki, Greece</p>	10:40-10:55	<p>Effect of Silicon doping in SiN_x resistance switching MIS cells A. E. Mavropoulos¹, N. Vasileiadis^{1,2}, C. Bonafos³, P. Normand¹, V. Ioannou-Souglideris¹, G. Sirakoulis², P. Dimitrakis¹ ¹Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Greece ²Dept. of Electrical and Computer Engineering, Democritus University of Thrace, Xanthi 67100, Greece ³CEMES-CNRS et Université de Toulouse, BP94347-31055 Toulouse, France</p>
10:45-11:00	<p>Four-Dimensional (4D) Printing of Prototype Ferromagnetic Hybrid Scaffolds: Design, Fabrication, Mechanical & Magnetic Hyperthermia Evaluation A.T. Alexandridis^{1,2}, A. Makridis^{1,2}, N. Okkalidis³, I. Genitseftsis^{1,2}, A. Argyros^{2,4}, N. Michailidis^{2,4}, M. Angelakeris^{1,2} ¹Physics Dept., Aristotle University of Thessaloniki, Greece; ²Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Greece; ³Morphé, Praxitelous 1, Thessaloniki, Greece; ⁴Physical Metallurgy Laboratory, Mechanical Engineering Dept., School of Engineering, AUTH, Greece</p>	10:55-11:10	<p>Tuning the emission's spectral width by thickness variation at printable green color emitting polymers, potential for PLED based biosensing applications K. Papadopoulos¹, D. Tselekidou¹, A. Zachariadis¹, V. Kyriazopoulos², S. Kassavetis¹, A. Laskarakis¹, M. Gioti¹ ¹Nanotechnology Lab LTFN, Dept. of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece ²Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki- Tagarades, Greece</p>
11:00-11:30	Coffee Break		
11:30-13:40 🏠 AMF2	<p>TU3: Soft matter, polymers & composites Chair: A. Andreopoulou</p>	11:30-13:30 🏠 AMF3	<p>TU4: Low-dimensional materials, quantum materials & quasi-particles Chair: K. Papagelis</p>
11:30-11:55 INVITED	<p>Soft Matter Under Confinement G. Floudas Dept. of Physics, University of Ioannina, 45110 Ioannina, Greece University Research Center of Ioannina (URCI) - Institute of Materials Science and Computing, Greece</p>	11:30-11:45	<p>Can we manipulate exciton polaritons with gain? C. Tserkezis¹, C. Wolff¹, F. A. Shuklin¹, F. Todisco³, M. H. Eriksen¹, P. A. D. Gonçalves³, N. A. Mortensen^{1,4} ¹POLIMA—Center for Polariton-driven Light—Matter Interactions, University of Southern Denmark, Denmark; ²CNR NANOTEC, Institute of Nanotechnology, Italy ³ICFO, Barcelona Institute of Science and Technology, Spain; ⁴Danish Institute for Advanced Study, University of Southern Denmark, Denmark</p>
11:55-12:10	<p>How Polymers Penetrate Narrow Pores? P. Kardasis¹, G. Sakellariou², G. Floudas^{1,3} ¹Dept. of Physics, University of Ioannina, 45110 Ioannina, Greece</p>	11:45-12:00	<p>Biaxial strain tuning of exciton energy and polarization in monolayer WS₂ G. Kourmoulakis^{1,2†}, A. Michail^{3,4†}, I. Paradisanos¹, X. Marie⁵, M.M. Glazov⁶, L. Covaci⁷, E. Stratakis^{1,8}, K. Papagelis^{4,9}, J. Parthenios^{4*}, G. Kiioseoglou^{1,2*}</p>

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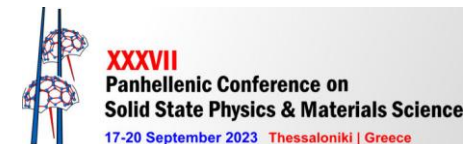


	<p>²Dept. of Chemistry, National and Kapodistrian University of Athens, 15771 Athens, Greece</p> <p>³University Research Center of Ioannina (URCI) - Institute of Materials Science and Computing, 45110 Ioannina, Greece</p>		<p>¹Institute of Electronic Structure and Laser, FORTH, Greece; ²Dept. of Materials Science and Technology, University of Crete, Greece; ³Dept. of Physics, University of Patras, Greece; ⁴Institute of Chemical Engineering Sciences, FORTH, Greece; ⁵Universite de Toulouse, INSA-CNRS-UPS, LPCNO, France; ⁶Ioffe Institute, St.-Petersburg, Russia; ⁷University of Antwerp, Antwerpen, Belgium; ⁸Dept. of Physics, University of Crete, Greece; ⁹School of Physics, Dept. of Solid-State Physics, AUTH, Greece</p>
12:10-12:25	<p>Effect of chalcopyrite nanoplates on bend shaped molecules nematic phases: phase diagram, order parameter, electro-optical properties</p> <p>S. B. Atata¹, V. Tzitzios², I. Lelidis¹</p> <p>¹Section of Cond. Matter Physics, Dept. of Physics, National and Kapodistrian University of Athens, Greece</p> <p>²Institute of Material Science, N. C. S. R. Demokrito, Greece</p>	12:00-12:15	<p>Stabilization of 2D raft structures of Au nanoclusters by a carbon support</p> <p>Th. Pavloudis^{1,2}, S. Lethbridge², J. McCormack^{2,3}, T. J. A. Slater⁴, J. Kioseoglou¹, R. J. Cobley³, R. E. Palmer²</p> <p>¹Dept. of Physics, Aristotle University of Thessaloniki, Greece;</p> <p>²Nanomaterials Lab, Mechanical Engineering, Swansea University, UK</p> <p>³Electronic and Electrical Engineering, Swansea University, UK</p> <p>⁴Cardiff Catalysis Institute, School of Chemistry, Cardiff University, UK</p>
12:25-12:40	<p>Analyzing the Crystallization Kinetics in Poly(butylene succinate) Composites using Isoconversional and Model Fitting Techniques</p> <p>E. Tarani¹, K. Papadopoulou², D.N. Bikiaris², K. Chrissafis¹</p> <p>¹Laboratory of Advanced Materials & Devices, School of Physics, Aristotle University of Thessaloniki, Greece; ²Laboratory of Polymer Chemistry and Technology, Dept. of Chemistry, Aristotle University of Thessaloniki, GR Thessaloniki, Greece</p>	12:15-12:30	<p>Raman study of the pressure response of bulk and monolayer MoS₂</p> <p>N. Sorogas¹, K. Tersis¹, K. Papagelis¹, D. Christofilos², J. Arvanitidis¹</p> <p>¹Physics Dept., Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p> <p>²School of Chemical Engineering & Laboratory of Physics, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
12:40-12:55	<p>Hierarchical self-assembly and dynamics in polypeptide copolymers produced with ROPISA</p> <p>M. Spyridakou¹, I. Tzourtzouklis¹, C. Bonduelle², S. Lecommandoux², R. Graf³, G. Floudas^{1,3,4}</p> <p>¹ Dept. of Physics, University of Ioannina, Ioannina, Greece</p> <p>²University Bordeaux, CNRS, Bordeaux INP, LCPO, France</p> <p>³Max Planck Institute for Polymer Research, Germany</p> <p>⁴University Research Center of Ioannina (URCI) - Institute of Materials Science and Computing, 45110 Ioannina, Greece</p>	12:30-12:45	<p>Electron density control in WSe₂ monolayers via photochlorination</p> <p>E. Katsipoulaki^{1,2}, G. Vailakis^{1,3}, I. Demeridou¹, D. Karfaridis⁴, P. Patsalas⁴, K. Watanabe⁵, T. Taniguchi⁶, I. Paradisanos¹, G. Kopidakis^{1,3}, G. Kioseoglou^{1,3}, E. Stratakis^{1,2}</p> <p>¹Institute of Electronic Structure and Laser, FORTH, Greece; ²Dept. of Physics, University of Crete, Heraklion, Greece; ³Dept. of Materials Science and Technology, University of Crete, Greece; ⁴Dept. of Physics, Aristotle University of Thessaloniki, Greece; ⁵ Research Center for Electronic and Optical Materials, National Institute for Materials Science, 1-1 Namiki, Tsukuba Japan; ⁶ Research Center for Materials Nanoarchitectonics, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044, Japan</p>
12:55-13:10	<p>Isothermal melt-crystallization of Polylactic acid/Halloysite Nanotubes Nanocomposites: Crystal Structure, Morphology and Polymer Fractions</p> <p>A. Giannakopoulou¹, S. Kyriazi¹, A.A. Bampaki¹, E.E. Zavvou¹, K. Papapetros², K.S. Andrikopoulos¹, P.K. Karahaliou¹, C.A. Krontiras¹</p> <p>¹Dept. of Physics, University of Patras, Greece</p> <p>²Dept. of Chemical Engineering, University of Patras, Greece</p>	12:45-13:00	<p>Biaxial strain effect on single layer MoS₂ reflectance</p> <p>E. Katsarou¹, N. Balakeras¹, A. Serra¹, A. Michail^{2,3}, K. Filintoglou⁴, J. Parthenios², S. Ves¹, K. Papagelis^{1,2}</p> <p>¹School of Physics, Dept. of Solid-State Physics, Aristotle University of Thessaloniki, Thessaloniki Greece; ²Institute of Chemical Engineering Sciences, FORTH ICE/HT, Greece; ³Dept. of Physics, University of Patras, Greece; ⁴HENANOTECH, Komnion 17, 54 624, Thessaloniki</p>
13:10-13:25	<p>Monitoring the α' to α crystal phase transition of PLA by Raman spectroscopy</p>	13:00-13:15	<p>A nomenclature scheme for pores, flakes and edges of honeycomb lattices and an algorithm for their generation and numbering</p>

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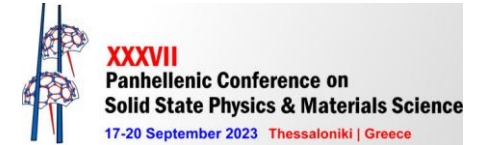


	<p>A.M. Psarelis¹, P.C. Tsaousis^{1,2}, P.K. Karahaliou³, C.A. Krontiras³ and G.A. Voyiatzis¹, K.S. Andrikopoulos^{1,3}</p> <p>¹Foundation for Research and Technology, Hellas / Institute of Chemical Engineering Sciences (FORTH/ICE-HT), Greece</p> <p>²Dept. of Chemistry, University of Patras, Greece</p> <p>³Dept. of Physics, University of Patras, Greece</p>		<p>Z.G. Fthenakis^{1,2,3}</p> <p>¹Istituto Nanoscienze-CNR, Piazza San Silvestro 12, Pisa, 56127, Italy</p> <p>²Theoretical and Physical Chemistry Institute, NHRF, Athens, Greece</p> <p>³NEST, Scuola Normale Superiore, Italy</p>
		<p>13:15-13:30</p>	<p>Quantum Interference in Spontaneous Emission: Bismuth Chalcogenides in Light—Matter Interactions</p> <p>N. Kyvelos¹, G. Tsigaridas², E. Paspalakis³, N. A. Mortensen^{1,4}, V. Yannopoulos² and C. Tserkezis¹</p> <p>¹POLIMA—Center for Polariton-driven Light—Matter Interactions, University of Southern Denmark, Campusvej 55, DK-5230 Odense M, Denmark; ²Dept. of Physics, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece; ³Dept. of Materials Science, University of Patras, Greece</p> <p>⁴Danish Institute for Advanced Study, University of Southern Denmark, Denmark</p>
<p>13:30-14:45 Lunch Break / Exhibition - Networking - Posters</p>			
<p>14:45-16:25</p> <p>🏠 AMF2</p>	<p>TU5: Magnetism and strongly correlated systems</p> <p>Chair: K. Trohidou</p>	<p>14:45-16:25</p> <p>🏠 AMF3</p>	<p>TU6: Functional materials & nanotechnology</p> <p>Chair: P. Keliris</p>
<p>14:45-15:10</p> <p>INVITED</p>	<p>Nanodiamonds-Based Hybrid Magnetic Nanostructures: Synthesis, Characterization, Properties and Prospects</p> <p>A.P. Douvalis, A.B. Bourlinos, P. Ziogas</p> <p>Physics Dept., University of Ioannina, 45110 Ioannina, Greece</p>	<p>14:45-15:10</p> <p>INVITED</p>	<p>On the Metastability of Bimetallic Nanoparticles Grown from the Gas Phase</p> <p>P. Grammatikopoulos^{1,2}, J. Kioseoglou³, V. Singh⁴, L. Lari^{5,6}</p> <p>¹Dept. of Materials Sciences and Engineering, Guangdong Technion, Israel Institute of Technology, , China</p> <p>²Guangdong Provincial Key Laboratory of Materials and Technologies for Energy Conversion, Guangdong Technion – Israel Institute of Technology, China</p> <p>³School of Physics, Aristotle University of Thessaloniki, Greece</p> <p>⁴Dept. of Physics, Jai Prakash University, Chapra, Bihar, India</p> <p>⁵School of Physics, Engineering and Technology, University of York, UK</p> <p>⁶The York-JEOL Nanocentre, University of York, UK</p>
<p>15:10-15:25</p>	<p>Temperature dependent EXAFS spectroscopy on silica coated Fe-triazole nanoparticles</p> <p>E.Petsali¹, F. Pinakidou², V. Tangoulis², N. Lalioti², F. D’Acapito³, E. C. Paloura¹, M. Katsikini¹</p> <p>¹Aristotle University of Thessaloniki, School of Physics, Dept. of Cond. Matter and Materials Physics, Thessaloniki Greece; ²University of Patras, Dept. of Chemistry, Lab. Inorganic Chemistry, Greece; ³CNR-IOM-OGG, c/o ESRF LISA CRG, Grenoble, France</p>	<p>15:10-15:25</p>	<p>Thermal studies of Pd/MoS₂ interface: the role of Sulphur excess</p> <p>D. Tsikritzis^{1,2}, N. Tsud³, T. Skála³, L. Sygellou^{4*}</p> <p>¹Dept. of Electrical & Computer Engineering, Hellenic Mediterranean University, Heraklion 71410, Crete, Greece; ²Institute of Emerging Technologies (i-EMERGE) of HMU Research Center, Heraklion 71410, Crete, Greece; ³Charles University, Faculty of Mathematics and Physics, Dept. of Surface and Plasma Science, V Holešovičkách 2, Prague, 18000, Czech Republic; ⁴Institute of Chemical Engineering Sciences (ICE-HT), Foundation of Research and Technology, Hellas, P.O. Box 1414, 26504 Rio Patras, Greece</p>

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<p>15:25-15:40</p>	<p>Magnetic MXenes via thermal activation of Ti_3C_2Tx and Fe intercalation T. Salzmann¹, H. P.², I. Tarasov¹, M. Farle¹, U. Wiedwald¹ ¹University of Duisburg-Essen and Center for Nanointegration, Germany ²Université Grenoble Alpes, CNRS, Grenoble INP, France</p>	<p>15:25-15:40</p>	<p>Modeling the memristive electrical behavior of NiTi I.P. Antoniadou¹, S.G. Stavrinides², M.P. Haniyas², R. Picos³, E. Hatzikraniotis¹ ¹School of Physics, Dept. of Applied & Environmental Physics, Aristotle University of Thessaloniki, Greece; ²Physics Dept., International Hellenic University, Kavala, Greece; ³Industrial Engineering and Construction Dept., Universitat de les Illes Balears, Palma, Spain</p>
<p>15:40-15:55</p>	<p>Topological Hall effect in epitaxial thin films of tetragonal inverse Heusler compounds A. Markou^{1,2}, E. Lesne², P. K. Sivakumar³, P. Swekis², S. S. P. Parkin³, C. Felser¹ ¹Physics Dept., University of Ioannina, Greece ²Max Planck Institute for Chemical Physics of Solids, Dresden, Germany</p>	<p>15:40-15:55</p>	<p>Laser Annealing as a platform for optimising materials properties N. Kalfagiannis^{1,2} E. Lidorikis¹ ¹University of Ioannina, Dept. of Materials Science and Engineering, 45110 Ioannina, Greece; ²Nottingham Trent University, School of Science and Technology, Nottingham, NG11 8NS, UK</p>
<p>15:55-16:10</p>	<p>Spin and charge current dynamics in spintronic THz emitters E. Th. Papaioannou^{1,2} ¹ Dept. of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece ² Institute of Physics, Martin-Luther University Halle-Wittenberg, Germany</p>	<p>15:55-16:10</p>	<p>Utilization of pulsed laser ablation to create colloidal nitride nanoparticles for applications in flexible printed electronics S. Panos, N. Pliatsikas, S. Kassavetis, M. Gioti, P. A. Patsalas Nanotechnology Lab LTFN, Physics Dept., Aristotle University of Thessaloniki, Greece</p>
<p>16:10-16:25</p>	<p>Guiding Magnetorheological fluids with magnetic fields gradients N. Ntallis¹, K. N. Trohidou¹ ¹Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Athens, Greece</p>	<p>16:10-16:25</p>	<p>Single layer, white and solution processed OLEDs: blended polymers and copolymers as emitting films D. Tselekidou¹, K. Papadopoulou¹, V. Kyriazopoulos^{1,2}, K.C. Andrikopoulos³, A.K. Andreopoulos³, J.K. Kallitsis³, S. Logothetidis^{1,2}, M. Gioti¹ ¹ Nanotechnology Lab LTFN, Physics Dept., Aristotle University of Thessaloniki, Greece; ² Organic Electronic Technologies P.C. (OET), Thessaloniki, Greece ³ Dept. of Chemistry, University of Patras, Greece</p>
<p>16:25-17:00 Coffee Break</p>			
<p>17:00-18:15  AMF2</p>	<p>TU7: Interdisciplinary condensed-matter physics Chair: D. Christofilos</p>	<p>17:00-18:30  AMF3</p>	<p>TU8: Functional materials & nanotechnology Chair: G. Kioseoglou</p>
<p>17:00-17:15</p>	<p>Predicting cementitious materials' macroscopic behaviour using their microstructural characteristics S. Karagianni, L. Kouris, A. Konstantinidis Laboratory of Engineering Mechanics, School of Civil Engineering, AUTH, Greece</p>	<p>17:00-17:15</p>	<p>Quantitative characterization of hierarchical multiscale surfaces G. Papaveros^{1,2,3}, V. Constantoudis^{1,2}, N. Vouroutzis³, E. Gogolides^{1,2} ¹Institute of Nanoscience and Nanotechnology NCSR Demokritos, Greece ²Nanometris P.C, Agia Paraskevi, Greece ³Physics Dept., Aristotle University of Thessaloniki, Greece</p>
<p>17:15-17:30</p>	<p>Preparation of Fly Ash/Green Polymer Composites and Its Effects on Thermomechanical Properties, Dielectric behavior and Electrical Energy Storage and Recovery A. C. Patsidis¹, M. Souliotis² ¹Smart Materials & Nanodielectrics Laboratory, Dept. of Materials Science, School of Natural Sciences, University of Patras, Patras 26504, Greece ²Dept. of Chemical Engineering, University of Western Macedonia, Kozani, Greece</p>	<p>17:15-17:30</p>	<p>Coated 3D-Printed Photonic Metamaterials for Near-IR and THz Applications A. Theodosi^{1,2}, D. Ladika^{1,2}, E. Mavrona³, E. Perivolari⁴, M. Farsari¹, A. Xomalis^{5,6}, O. Tsilipakos⁷ and M. Kafesaki^{1,2} ¹Institute of Electronic Structure and Laser, FORTH, Crete, Greece; ²Dept Materials Science and Technology, University of Crete, Greece; ³Lab for Transport at Nanoscale Interfaces, EMPA, Switzerland; ⁴Lab for Advanced Materials Processing, EMPA, Switzerland; ⁵Lab for Mechanics of Materials and Nanostructures, EMPA,</p>

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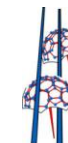
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			Switzerland; ⁶ Dept Electronic Systems, Norwegian University of Science and Technology, Norway; ⁷ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece
17:30-17:45	Consumed by Flames: Assessing the Effects of a Fire Protocol on Wall Painting Mock-Ups L. Malletzidou , T.T. Zorba, K. Chrissafis, G. Vourlias and K.M. Paraskevopoulos <i>Laboratory of Advanced Materials and Devices, School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece</i>	17:30-17:45	Band profiling and carrier distribution in InN nano-heterostructures A. Asteris, C. Katsidis , A. Georgakilas <i>Microelectronics Research Group (MRG), Dept. of Physics, University of Crete, P.O. Box 2208, GR-71003 Heraklion, Crete, Greece, and Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), P.O. Box 1385, GR-70013 Heraklion, Crete, Greece</i>
17:45-18:00	Natural Lazurite and Synthetic Ultramarine: Characterization of commercially available pigments A. Pourliaka , L. Malletzidou, D. Karfaridis, T. Zorba, K. M. Paraskevopoulos, E. Pavlidou, G. Vourlias <i>Lab Advanced Materials and Devices, School of Physics, AUTH, Greece</i>	17:45-18:00	SnS₂-based materials for removal of Cr(VI) from aqueous media V. Karagianni , Manolis J. Manos <i>Dept. of Chemistry, University of Ioannina, Greece</i>
18:00-18:15	Revisiting the Classical Laws: Part I - Hooke, Newton and Maxwell; Part II - Fourier, Fick, Darcy and von Mises E. C. Aifantis <i>Laboratory of Mechanics and Materials, School of Civil Engineering, Aristotle University of Thessaloniki, Greece</i>	18:00-18:15	New UV to visible shifting material for enhanced performance of carbon-based perovskite solar cells in ambient conditions A. Karavioti , E. Stathatos <i>Nanotechnology & Advanced Materials Laboratory, Dept. of Electrical and Computer Engineering, University of the Peloponnese, Greece</i>
		18:15-18:30	Near Ambient Pressure (NAP)-XPS Applications and Instrumentation Liana Socaciu-Siebert <i>SPECS Surface Nano Analysis GmbH, Voltastr. 5, 13355 Berlin, Germany</i>
18:30-20:00	POSTER SESSION 2 / Exhibition - Corporate presentations – Networking		
21:00	CONFERENCE DINNER		

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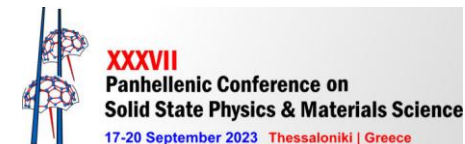
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09:00-11:05 🏠 AMF2	WE1: Joined Session: Metals and Magnetic Materials Chair: A. Douvalis	
09:00-09:40 KEYNOTE	Magnetism of Ni-Mn-based functional Heuslers M. Acet <i>Faculty of Physics, University of Duisburg-Essen, Duisburg, Germany</i>	
09:40-10:05 INVITED	Porous metals: production and characterization and mechanical response under quasi-static and dynamic loads E. Smyrnaio ¹ , C. Tegos ¹ , F. Stergioudi ^{1,2} , G. Maliaris ³ , N. Michailidis^{1,2*} ¹ Physical Metallurgy Laboratory, Mechanical Engineering Dept., School of Engineering, Aristotle University of Thessaloniki, Greece; ² Centre for Research & Development of Advanced Materials (CERDAM), Center for Interdisciplinary Research and Innovation (CIRI) and Texas A&M Engineering Experiment Station (TEES), Balkan Centre, 57001 Thessaloniki, Greece; ³ Additive Manufacturing Laboratory, Dept. of Chemistry, School of Science, International Hellenic University, 65404 Kavala, Greece	
10:05-10:20	Recent Developments on Soft Magnetic Ferrites V. Zaspalis^{1,2} , V. Tsakaloudi ¹ , G. Kogias ¹ , S. Papaioannou ¹ , S. Zaspalis ¹ ¹ Center for Research and Technology Hellas, Laboratory of Inorganic Materials, Themi-Thessaloniki, Greece; ² Aristotle University of Thessaloniki, Dept. of Chemical Engineering, Laboratory of Materials Technology, 54124 Thessaloniki, Greece)	
10:20-10:35	Investigation of the magnetic properties in the non-stoichiometric Heusler alloy Ni ₅₀ Mn _{25+x} Sn _{25-x} with the addition of doping elements (Cr/Cu) D. Anastasakos-Paraskevopoulos^{1,4} , C. Sarafidis ² , M. Giannouri ³ , V. Alexandrakis ⁴ and I. Panagiotopoulos ¹ ¹ Dept. of Materials Science and Engineering, University of Ioannina, 45500 Ioannina, Greece; ² School of Physics, Aristotle University of Thessaloniki, Greece; ³ Dept. of Physics, National and Kapodistrian University, Greece; ⁴ NCSR Demokritos, Athens Greece	
10:35-10:50	Nanostructured FeCo Films: Exceeding the Slater-Pauling Limit C. Binns¹ , R. López-Martín ¹ , J. Angel de Toro ¹ , B. Santos Burgos ¹ , P. Normile ¹ , A. Pratt ² , T. Bird ² , M. Alotaibi ² , J. Pearce ² , D. Hesp ² , S. Cavill ² , S. Louch ³ , S. Baker ⁴ , S. Tornton ⁴ ¹ IRICA, Universidad de Castilla-La Mancha, Ciudad Real, Spain; ² School of Physics, Engineering and Technology, University of York, York, UK; ³ Smith and Nephew Ltd, Hull, UK ⁴ Dept. of Physics and Astronomy, University of Leicester, UK	
10:50-11:05	Defect recovery in high-dose ion irradiated Fe E. Mitsi^{1,2} , T. Dunatov ³ , U. Jäntschi ⁴ , M. Klimenkov ⁴ , G. Provas ³ , M. Axiotis ⁵ , A. Lagoyannis ⁵ , T. Tadić ³ , G. Apostolopoulos ² ¹ Dept. of Physics, National Technical University of Athens, Athens, Greece; ² Institute of Nuclear & Radiological Science & Technology, Energy & Safety, NCSR "Demokritos", Athens, Greece ³ Ruder Bošković Institute, Laboratory for Ion Beam Interactions, Zagreb, Croatia; ⁴ Institute for Applied Materials-Applied Materials Physics, Karlsruhe Institute of Technology, Karlsruhe, Germany; ⁵ Tandem Accelerator Laboratory, Institute of Nuclear and Particle Physics, N.C.S.R. Demokritos", Athens, Greece	
11:05-11:30	Coffee Break	
11:30-13:10 🏠 AMF2	WE2: Functional materials & nanotechnology Chair: P. Grammatikopoulos	11:30-13:10 🏠 AMF3
11:30-11:55 INVITED	From plasma nanostructured surfaces to the commercial bacteria detection kit: A journey from lab to market E. Gogolides <i>Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens, Greece</i>	11:30-11:55 INVITED
		WE3: Metals Chair: C. Chrissafis
		Metallurgy in the Crossroads: Overcoming Challenges for Energy Transition and Climate Change A. Xenidis <i>School of Mining & Metallurgical Engineering, National Technical University of Athens, Greece</i>

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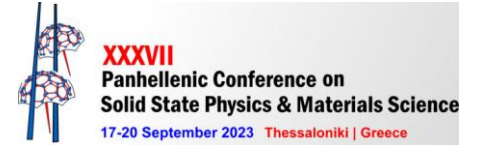


11:55-12:10	Novel Graphene-Based Materials as a Tool for Improving Long-Term Storage of Cultural Heritage G. Gorgolis ^{1,2} , Steffen Ziemann ³ , Maria Kotsidi ¹ , George Paterakis ^{1,2} , Nikos Koutroumanis ¹ , Christos Tsakonas ¹ , Manfred Anders ³ , Costas Galiotis ^{1,2*} ¹ Institute of Chemical Engineering Sciences, Foundation of Research and Technology-Hellas (FORTH/ICE-HT), Patras, Greece ² Dept. of Chemical Engineering, University of Patras, Patras, Greece ³ Zentrum für Bucherhaltung GmbH (ZFB), Leipzig, Germany	11:55-12:10	Experimental and theoretical analysis on the fatigue life of AA 7075-T6 aluminum alloy at various rolling orientations A. Prospathopoulos ^{1,2} , A. Argyros ^{1,2} , M. Pappa ^{1,2} , N. Michailidis ^{1,2} ¹ Physical Metallurgy Laboratory, Dept. of Mechanical Engineering, AUTH, Greece ² Centre for Research & Development of Advanced Materials (CERDAM), Center for Interdisciplinary Research and Innovation, Balkan Centre, Greece
12:10-12:25	Lab and Large-Scale Preparation of Durable VO₂ films E.Gagaoudakis ¹ , E.Mantsiou ¹ , L. Zouridi ^{1,2} , E. Aperathitis ¹ , G. Kiriakidis ¹ and V. Binas ^{1,3} ¹ Foundation of Research and Technology - Hellas, Institute of Electronic Structure & Laser (FORTH-IESL), Heraklion Greece ² Dept. of Materials Science and Technology, University of Crete, Greece ³ Dept. of Physics, University of Crete, Greece	12:10-12:25	Effect of NO_x and SO_x contaminants on corrosion behavior of 304L stainless steel in MEA and DMCA/S₁N aqueous amine solutions E. Lamprou ¹ , A. Baxevani, ¹ F. Stergioudi ¹ , N. Michailidis ¹ , E. Nessi ² , A.I. Papadopoulos ² , P. Seferlis ³ ¹ Physical Metallurgy Laboratory, Mechanical Engineering Dept., AUTH, Greece ² Chemical Process & Energy Resources Institute, CERTH, Greece ³ Lab of Machine Dynamics, Mechanical Engineering Dept., AUTH, Greece
12:25-12:40	A new methodology employing chitosan-capped AuNPs for naked-eye colorimetric detection of nucleic acids in crude samples S. Grammatikos ^{1,2} , I. Svliantopoulos ^{1,3} and E. Gizeli ^{1,2} ¹ Institute of Molecular Biology and Biotechnology, Foundation for Research and Technology-Hellas, 100 N. Plastira Str., 70013 Heraklion, Greece ² Dept. of Biology, University of Crete, Heraklion, Greece ³ Dept. of Chemistry, University of Crete, Heraklion, Greece	12:25-12:40	Durable superhydrophobic silver coated copper foam for efficient oil/water separation A. Baxevani ¹ , F. Stergioudi ¹ , L. Malletzidou ² and G. Vourlias ² ¹ Physical Metallurgy Laboratory, School of Mechanical Engineering, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece ² Laboratory of Advanced Materials & Devices, School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece
12:40-12:55	3D micro – capacitors based on ZnO nanowires N. Chouchoumi ¹ , E. Hourdakis ¹ , C. A. Krontiras ² and C. Tsamis ¹ ¹ Institute of Nanoscience and Nanotechnology / NCSR Demokritos, Athens, Greece ² Physics Dept., University of Patras, Patras, Greece	12:40-12:55	Cesium and water adsorption on a polycrystalline molybdenum surface: the effect of the work function change O. Papageorgiou, D. Vlachos Dept. of Physics, University of Ioannina, Greece
12:55-13:10	Development of Polymeric Coatings with Improved Self-healing Properties via the Incorporation of Nanoadditives K. Chrissopoulou ¹ , E. Giannakaki ^{1,2} , K. Giannaris ^{1,3} , M. M. Stylianakis ^{1,4} and S. H. Anastasiadis ^{1,2} ¹ Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion Crete, Greece ² Dept. of Chemistry, University of Crete, Heraklion Crete, Greece ³ Dept. of Materials Science and Technology, University of Crete, Heraklion Crete, Greece ⁴ Dept. of Nursing, Hellenic Mediterranean University, Heraklion Crete, Greece	12:55-13:10	Effects of Ga and Cu on the structural, mechanical, and electronic properties of β-Ti-45Nb alloy by experiments and ab initio calculations Y. Fortouna ¹ , L. A. Alberta ² , J. Vishnu ² , S. Pilz ² , A. Gebert ² , C. Lekka ^{1,3} , K. Nielsch ^{4,5,6} , M. Calin ² ¹ University of Ioannina, Dept. of Materials Science & Engineering, Greece; ² Institute for Complex Materials, Leibniz Institute for Solid State and Materials Research (IFW) Dresden, Germany; ³ University Research Center of Ioannina (URCI), Institute of Materials Science and Computing, Greece; ⁴ Institute for Metallic Materials, Leibniz Institute for Solid State and Materials Research (IFW) Dresden e.V, Dresden, Germany; ⁵ Institute of Materials Science, Technische Universität Dresden, Dresden, Germany; ⁶ Institute of Applied Physics, Technische Universität Dresden, Dresden, Germany

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13:15 – 14:15

WE4: Special Session on Open Innovation and Interconnection

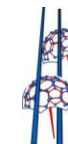
Chairs: N. Boukos – S. Kassavetis

Presentations by Research Associations, Research Infrastructures, and Lab Networks - Discussion

14:15 – 14:30

Closing Ceremony – Young researcher awards

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POSTERS 1	POSTER SESSION 1: Monday 18 September / Chair: J. Arvanitidis Computational materials science
P1.1	<p>Core reconstruction and electronic structure of the edge Shockley partial dislocation in wurtzite GaN I. Belabbas¹, G. P. Dimitrakopoulos², J. Kioseoglou², J. Chen³, J. Smalc-Koziorowska⁴ ¹ <i>Equipe de Cristallographie et de Simulation des Matériaux, Laboratoire de Physico-Chimie des Matériaux et Catalyse, Faculté des Sciences Exactes, Université de Bejaia, 06000, Algeria</i> ² <i>Dept. of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece;</i> ³ <i>CIMAP-Alençon, UMR6252, CNRS-CEA-ENSICAEN, Université de Caen Normandie, F-14032, France</i> ⁴ <i>Institute of High Pressure Physics, Polish Academy of Sciences, Sokołowska 29/37, 01-142 Warsaw, Poland</i></p>
P1.2	<p>Strain engineering of wurtzite indium nitride O. Namir¹, J. Kioseoglou², Ph. Komninou², Th. Karakostas², I. Belabbas¹ ¹ <i>Equipe de Cristallographie et de Simulation des Matériaux, Laboratoire de Physico-Chimie des Matériaux et Catalyse, Faculté des Sciences Exactes, Université de Bejaia, 06000, Algeria</i> ² <i>Dept. of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece</i></p>
P1.3	<p>A hybrid molecular dynamics/machine learning framework to calculate the viscosity and thermal conductivity of Ar, Kr, Xe, and O V. Tsioulos, S. Serifis, K. Bakopoulos, A. Nika, I. Vourgidis, N. Ntinou, C. Stavrogiannis, F. Sofos <i>Cond. Matter Physics Laboratory, Dept. of Physics, University of Thessaly, 35100 Lamia, GR</i></p>
P1.4	<p>Generating analytical mathematical equations for the transport properties of fluids from simulation data through symbolic regression D. Aggelis, F. Sofos, T.E. Karakasidis <i>Cond. Matter Physics Laboratory, Dept. of Physics, University of Thessaly, 35100 Lamia, GR</i></p>
P1.5	<p>Investigating Thermoluminescence Signal Replication in BeO:Mg²⁺, Si⁴⁺ via First Principles Computational Analysis E. Tsoutsoumanos^{1,2}, D. Tzeli^{3,4}, A. Avramopoulos¹, N. Laskaris^{2,5}, P.G. Konstantinidis⁶, N. Lathiotakis⁴, G. Kitis⁶, G.S. Polymeris², T. Karakasidis¹ ¹ <i>Cond. Matter Physics Laboratory, Physics Dept., University of Thessaly, GR-35100, Lamia, Greece</i> ² <i>Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", GR-15310, Ag. Paraskevi (Athens), Greece;</i> ³ <i>Laboratory of Physical Chemistry, Dept. of Chemistry, National and Kapodistrian University of Athens, GR-15771, Zografou (Athens), Greece;</i> ⁴ <i>Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, GR-11635, Athens, Greece;</i> ⁵ <i>Dept. of Industrial Design and Production Engineering, University of West Attica, GR-12244, Egaleo (Athens), Greece;</i> ⁶ <i>Nuclear and Elementary Particle Physics Laboratory, Physics Dept., Aristotle University of Thessaloniki, GR-54214, Thessaloniki, Greece</i></p>
P1.6	<p>Polarization Mechanisms and Non-Linear Optical Response in Photochromic Molecular Materials: An ab-initio Study A. Avramopoulos <i>Dept. of Physics, University of Thessaly, Lamia, Greece</i></p>
P1.7	<p>Materials modeling for environmental catalysis: from metal nanoparticles to halide perovskites Rafaëla Maria Giappa¹, Apostolos Pantousas¹, Constantinos C. Stoumpos¹, George Kopidakis^{1,2} and Ioannis N. Remediakis^{1,2} ¹ <i>Dept. of Materials Science and Technology, University of Crete, Heraklion, Greece;</i> ² <i>Institute of Electronic Structure and Laser, FORTH, Heraklion, Greece</i></p>
P1.8	<p>Topological defects for low dimensional chains of atoms. Statistical occurrence and effects of fields V. Vachtsevanos, H. Polatoglou <i>Aristotle University of Thessaloniki, Physics Dept., Thessaloniki, Greece</i></p>
P1.9	<p>Computational modelling of fibrous materials based on point pattern analysis E-M. Papia^{1,2}, V. Constantoudis^{1,3} ¹ <i>Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Agia Paraskevi, 15341, Greece;</i> ² <i>Dept. of Physics, School of Science, University of Athens, 15784 Athens, Greece</i> ³ <i>Nanometrisis p.c., Agia Paraskevi, 15341, Greece</i></p>

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P1.10	<p>Quantitative characterization of nanowire verticality using SEM images E. Stai^{1,2}, V. Constantoudis^{1,3}, D. Nioras^{1,4}, E. Gogolides^{1,3} ¹ Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Aghia Paraskevi 15341, Attiki, Greece; ² Dept. of Physics, National and Kapodistrian University of Athens, Athens, Greece ³ Nanometrisis p.c., Agia Paraskevi, Attiki 15310, Greece; ⁴ Physics Dept., National Technical University of Athens, Zografou Campus, Athens, Greece</p>
P1.11	<p>SEM-based estimation of the thickness of deposited films on rough substrates using Morphological Neural Networks A. Kondi^{1,2}, V. Constantoudis^{1,3} ¹ Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Agia Paraskevi, 15341, Greece; ² Dept. of Physics, School of Science, University of Athens, 15784 Athens, Greece ³ Nanometrisis p.c., Agia Paraskevi, 15341, Greece</p>
P1.12	<p>Ab initio calculations of antibacterial Ag, Cu and Ga coatings on the biocompatible β-TiNb(110) surface S. Ch. Papantoniou, V. Lontos, A. Mosxou, Ch. E. Lekka Dept. of Materials Science and Engineering, University of Ioannina, Greece</p>
P1.13	<p>Antibacterial Ag/TiO₂ (001) surfaces by ab initio calculations A.Ch. Galani¹, Ch. Kourti¹ and Ch. E. Lekka² ¹ Dept. of Materials Science and Engineering, University of Ioannina, Greece</p>
P1.14	<p>Electron irradiation induced structural transformations in deposited gold clusters studied by means of molecular dynamics I. Bounas^{1,2,3}, A.V. Verkhovtsev³, Th. Pavloudis^{1,2}, R.E. Palmer², A.V. Solov'yov³, J. Kioseoglou¹ ¹ School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece; ² Nanomaterials Lab, Mechanical Engineering, Swansea University, Bay Campus, Fabian Way, Swansea SA1 8EN, UK; ³ MBN Research Center, Altenhöferallee 3, 60438 Frankfurt am Main, Germany</p>
P1.15	<p>Exploring Phonon Interference: Insights from a Nano-Scale Silicon Double Slit Experiment E. Nikidis¹, P. Desmarchelier², K. Termentzidis², J. Kioseoglou¹ ¹ Physics Department, Aristotle University of Thessaloniki, Greece; ² CETHIL, UMR5008 Univ Lyon, INSA Lyon, CNRS 69621 Villeurbanne, France</p>
P1.16	<p>TCAD simulation of organic field-effect transistors fabricated on plastic substrates T. Kaimakamis, D. Tassis Aristotle University of Thessaloniki, School of Physics, 54124, Thessaloniki, Greece</p>
POSTERS 1	Magnetism & strongly correlated systems
P1.17	<p>Fabrication Protocol of 3D Printed Polymer-Bonded Magnets D. Trygoniaris^{1,2}, A. Makridis^{1,2}, N. Okkalidis³, K. Kazeli^{1,2}, M. Angelakeris^{1,2} ¹ Department of Condensed Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece; ² Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece ³ Morphé, Praxitelous 1, Thessaloniki, 54641, Greece</p>
P1.18	<p>Thermal evaluation of magnetic scaffolds 3D-printed from homemade magnetic filaments I. Genitseftsis^{1,2}, A. Makridis^{1,2}, A.T. Alexandridis^{1,2}, N. Okkalidis³, M. Angelakeris^{1,2} ¹ Dept. of Cond. Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece; ² Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece ³ Morphé, Praxitelous 1, Thessaloniki, 54641, Greece</p>
P1.19	<p>An interactive e-tool for exploring magnetism and magnetic materials G. Natsiopoulos^{1,2}, M. Angelakeris^{1,2} ¹ Dept. of Cond. Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece; ² Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece</p>
P1.20	<p>Fe-based magnetic nanoparticles: Biomedical evaluation with criteria the structure and the morphology and their effect on collective magnetic features E. Kasotakis^{1,2}, A. Makridis^{1,2}, H. Gyulasaryan^{3,2}, A. Manukyan^{3,2}, E. Papadopoulou^{4,2}, M. Spasova^{4,2}, M. Farle^{4,2}, and M. Angelakeris^{1,2} ¹ School of Physics, Aristotle University of Thessaloniki, 54124 Greece; ² Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece ³ Institute for Physical Research, National Academy of Sciences, Ashtarak 0203, Armenia; ⁴ Faculty of Physics and Center of Nanointegration (CENIDE), University of Duisburg-Essen, Germany</p>

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P1.21	<p>PEGylated magnetic nanoparticles conjugated with curcumin for biomedical applications - Synthesis and Characterization. F. Malkaki^{1,2}, K. Kazeli^{1,2}, A. Makridis^{1,2}, L. Malletzidou^{1,2}, G. Vourlias^{1,2}, M. Angelakeris^{1,2} ¹School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece; ²Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece</p>
P1.22	<p>Fe₃C/Fe Magnetic nanohybrids: Structural, magnetic features & biomedical applicability M. Tsompanoglou^{1,2}, A. Makridis^{1,2}, H. Gyulasaryan³, A. Manukyan³, E. Papadopoulou⁴, M. Spasova⁴, M. Farle⁴, M. Angelakeris^{1,2} ¹School of Physics, Faculty of Sciences, Aristotle University, 54124 Thessaloniki, Greece; ²MagnaCharta, Center for Interdisciplinary Research and Innovation (CIRI-AUTH), 57001 Thessaloniki, Greece; ³Inst. for Physical Research, National Academy of Sciences, Ashtarak 0203, Armenia; ⁴Faculty of Physics and Center of Nanointegration (CENIDE), University of Duisburg-Essen, Germany</p>
P1.23	<p>A Novel Two-Stage 3D-Printed Halbach-Array Based Device for Magnetomechanical Applications P. Kyriazopoulos^{1,2,3}, A. Makridis^{1,2}, D. Papadopoulos^{1,2}, N. Maniotis^{1,2}, M. Angelakeris^{1,2} ¹Dept. of Cond. Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece; ²Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece ³Dept. of Mechanical Engineering, AUTH, Thessaloniki, 54006, Greece</p>
P1.24	<p>Magnetic properties of multilayers with ultrathin oxide layers D.I. Anyfantis¹, C. Ballani², N. Kanistras^{1,2}, C.M. Tsakiris¹, A. Barnasas¹, S. Mougopetros¹, S.-I.K. Douros¹, E. Rovilos¹, G. Schmidt^{2,3}, E.Th. Papaioannou^{2,4}, P. Pouloupoulos¹ ¹Materials Science Dept., University of Patras, 26504 Patras, Greece; ²Institut für Physik, Martin-Luther Universität Halle Wittenberg, Von-Danckelmann-Platz 3, 06120 Halle, Germany ³Interdisziplinäres Zentrum für Materialwissenschaften, Nanotechnikum Weinberg, Martin-Luther University Halle-Wittenberg, 06120 Halle, Germany ⁴Dept. of Physics, School of Natural Sciences, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
P1.25	<p>Synthesis of magnetic nanoparticles with core-shell structure for encapsulation of pharmaceutical substances D. Kordonidou¹, G. K. Pouroutzidou^{2,3}, K. Kazeli^{4,5}, N. Florini⁶, Ph. Kominou⁶, G. Vourlias^{1,2}, M. Angelakeris^{4,5}, E. Kontonasaki³ ¹Dept. of Physics, Aristotle University of Thessaloniki, Greece; ²Laboratory of Advanced Materials and Devices, Dept. of Physics, Aristotle University of Thessaloniki, Greece ³Division of Prosthodontics, Dept. of Dentistry, School of Health Sciences, Aristotle University of Thessaloniki, Greece; ⁴Dept. of Cond. Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece; ⁵Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece; ⁶Electron Microscopy and Structural Characterization Laboratory, Dept. of Physics, Aristotle University of Thessaloniki, 54124, Greece</p>
P1.26	<p>Microwave-Assisted Switching in nanodisks: A micromagnetic study Ch. Thanos¹, I. Panagiotopoulos^{1,2} ¹Dept. of Materials Science and Engineering, University of Ioannina, 45110 Ioannina Greece; ²Institute of Materials Science and Computing, University Research Center of Ioannina (URCI), 45110 Ioannina, Greece</p>
P1.27	<p>Spin current transport and THz emission in Ni/NiO/Pt and Co/CoO/Pt multilayers N. Kanistras¹, L. Scheuer², D. Anyfantis³, G. Schmidt¹, P. Pouloupoulos³, E.Th. Papaioannou^{1,4} ¹Institute of Physics, Martin-Luther University Halle-Wittenberg, 06120 Halle, Germany; ²Fachbereich Physik and Landesforschungszentrum OPTIMAS, Technische Universität Kaiserslautern, 67663, Kaiserslautern, Germany; ³Dept. of Materials Science, School of Natural Sciences University of Patras, Rio, 26504 Patras, Greece; ⁴Dept. of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece</p>
P1.28	<p>Growth and magnetic properties of Fe/Pt heterostructures with L1₀-FePt alloyed interfaces L. Scheuer¹, D. Karfaridis², I. Vasileiadis², Th. Kehagias², G. Vourlias², E.Th. Papaioannou^{2,3} ¹Fachbereich Physik, Technische Universität Kaiserslautern, Kaiserslautern, Germany; ²Dept. of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece ³Institute of Physics, Martin-Luther University Halle-Wittenberg, 06120 Halle, Germany</p>
	<p>Temperature dependent spin pumping and inverse spin Hall effect in LaSrMnO / NiO / Pt heterostructures E.Th. Papaioannou^{1,2}, C. Ballani², P. Geier², P. Trempler², C. Hauser², O. Gomonay³, G. Schmidt² ¹Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece; ²Institute of Physics, Martin-Luther University Halle-Wittenberg, Halle, Germany ³Institute of Physics, Johannes Gutenberg University Mainz, Mainz, Germany</p>

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P1.29	<p>Cementite nanoparticles as magnetic particle hyperthermia agents: exploring the effect of synthesis conditions through a XANES study F. Pinakidou¹, M. Angelakeris¹, E.C. Paloura¹, A. Manukyan² and M. Katsikini¹ ¹<i>Aristotle University of Thessaloniki, School of Physics, 54124, Thessaloniki, Greece;</i> ²<i>Institute for Physical Research of National Academy of Sciences, Armenia</i></p>
P1.30	<p>Magnetization Switching in Obliquely Deposited Ru-Co Artificial Ferrimagnets P. Ntetsika¹, I. Panagiotopoulos¹, A. Markou², L. Stoleriu³, A. Stancu³ ¹<i>Dept. of Materials Science and Engineering, University of Ioannina, 45110 Ioannina Greece;</i> ²<i>Dept. of Physics, University of Ioannina, 45110 Ioannina Greece</i> ³<i>Dept. of Physics, Alexandru Ioan Cuza University, 700506 Iasi, Romania</i></p>
P1.31	<p>Antiferromagnetic L1₀ MnPt thin films A. Kaidatzis¹, R. Pedan², M. Garrido-Segovia^{3,4}, A. Evenisse⁵, E. Navarro³, E. Devlin¹, J. M. García-Martín⁴, A. Thiaville⁵, D. Niarchos¹ and I. Vladymyrskiy² ¹<i>Institute of Nanoscience and Nanotechnology, N.C.S.R. "Demokritos", Aghia Paraskevi, Greece;</i> ²<i>Physical Materials Science and Heat Treatment Dept., National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine;</i> ³<i>Departamento de Física de Materiales, Universidad Complutense de Madrid, Madrid, Spain</i> ⁴<i>Instituto de Micro y Nanotecnología, IMN-CNM, CSIC (CEI UAM+CSIC), Tres Cantos, Madrid, Spain;</i> ⁵<i>Université Paris-Saclay, CNRS, Laboratoire de Physique des Solides, Orsay, France</i></p>
P1.32	<p>Electronically-driven local lattice distortions in molecule-intercalated iron-chalcogenide superconductors M. Kaitatzi^{1,2,*}, A. Deltsidis^{1,2}, E. S. Bozin³ and A. Lappas¹ ¹<i>Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Vassilika Vouton, 71110 Heraklion, Greece;</i> ²<i>Dept. of Materials Science & Technology, University of Crete, Voutes, 71003 Heraklion, Greece;</i> ³<i>Cond. Matter Physics and Materials Science Dept., Brookhaven National Laboratory, Upton, NY 11973, USA</i></p>
P1.33	<p>Mössbauer study of iron oxide nanoparticles C. Karra, C. Sarafidis <i>School of Physics, Aristotle University, 54124 Thessaloniki, Greece</i></p>
P1.34	<p>Micromagnetic simulation of skyrmion stabilization in nanowire and motion under spin-polarized current A. Gerontas, G. Litsardakis <i>Laboratory of Materials for Electrotechnics, Dept. of Electrical & Computer Engineering, Aristotle University of Thessaloniki, Greece</i></p>
P1.35	<p>Development of Fe₃O₄-decorated Sn-hydroxide nanocomposites for advanced Cr(VI) capture in drinking water K. Kalaitzidou¹, T. Asimakidou¹, F. Pinakidou², N. Maniotis¹, A. Makridis², G. Vourlias², K. Simeonidis¹ ¹<i>Analytical Chemistry Laboratory, Department of Chemical Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i> ²<i>Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i></p>
POSTERS 1	Materials for energy & sustainability
P1.36	<p>First-principles calculations of SnO₂: Li predicted structures for anodes of lithium batteries A. Larabi¹, M. Mebarki¹, Ammaria Mahmoudi², Saloua Merazga¹ and Nouredine Gabouze¹ ¹<i>Centre de Recherche en Technologie des Semi-conducteurs pour l'Energétique (CRTSE), 2, Bd Frantz Fanon, BP 140 Alger 7-Merveilles 16038, Algeria.</i> ²<i>Division Etude et Prédiction des Matériaux, Unité de Recherche Matériaux et Energies Renouvelables. DEPM-URMER. Université de Tlemcen, Algeria</i></p>
P1.37	<p>Localized Surface Plasmon Resonances of Noble Metallic Nanoparticles in various Dielectric Environments M. Tsarmpopoulou¹, S. Grammatikopoulos², A. Stamatelatos¹, D. Ntemogiannis¹, V. Karoutsos¹, D. Geralis¹, D.M. Maratos¹, V. Alexopoulos¹, N.G. Ploumis¹, K. Giantzelidis¹, A.G. Chronis¹, M.M. Sigalas¹, P. Pouloupoulos¹ ¹<i>Materials Science Dept., University of Patras, 26504 Patras, Greece;</i> ²<i>Dept. of Mechanical Engineering, University of Peloponnese, M. Alexandrou 1, 26334 Patras, Greece</i></p>
P1.38	<p>Nanostructured ZnIn₂S₄-based systems as functional photocatalysts for hydrogen peroxide evolution N. Karamoschos¹, V.S. Makridis¹, E. Mastora¹ and D. Tasis^{1,2} ¹<i>Dept. of Chemistry, University of Ioannina, 45110 Ioannina, Greece;</i> ²<i>University Research Center of Ioannina (URCI), Institute of Materials Science and Computing, 45110 Ioannina, Greece</i></p>

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P1.39	<p>Thermoelectric Performance of Doped Higher Manganese Silicides Prepared by Pack Cementation A. Teknetzi¹, I. Ioannou², D. Stathokostopoulos¹, E. Tarani¹, Th. Kyratsi², and G. Vourlias¹ ¹Dept. of Physics, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece; ²Dept. of Mechanical and Manufacturing Engineering, University of Cyprus, 1678, Nicosia, Cyprus</p>
P1.40	<p>Synthesis of thermoelectric silver selenide powder employing the high energy ball milling technique N. Sidiropoulos¹, D. Stathokostopoulos¹, A. Teknetzi¹, D. Karfaridis¹, I. Karagiannis¹, V. Pavlidis¹, P. Mangelis², L. Malletzidou¹, Ch. Papoulia¹, F. Stergioudi³, Th. Kyratsi², G. Vourlias¹ ¹School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece; ²Dept. of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia 1678, Cyprus; ³School of Mechanical Engineering, Faculty of Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece</p>
P1.41	<p>Levulinic-based Ionic Liquids studied by Dielectric Spectroscopy S. Kriptou¹, G. Tsonos¹, A. Mezzetta², A. Mero², L. Guazzelli², K. Moutzouris¹, I. Stavrakas¹, Ch. Tsonos³ ¹Laboratory of Electronic Devices and Materials, Dept. of Electrical and Electronics Engineering, University of West Attica, 12244 Athens, Greece ²Dept. of Pharmacy, University of Pisa, Via Bonanno 6, 56126 Pisa, Italy; ³Dept. of Physics, University of Thessaly, 35100 Lamia, Greece</p>
P1.42	<p>Development of gas selective polymeric flat sheet and hollow fiber membranes employing entirely green solvents G. V. Theodorakopoulos, D.S. Karousos, A.A. Sapalidis, E.P. Favvas ¹Institute of Nanoscience and Nanotechnology, National Center for Scientific Research "Demokritos", Aghia Paraskevi 15341, Athens, Greece</p>
P1.43	<p>Transition between wetting states on slippery surfaces D. Tzitzilis, I. Ntakoumis, C. Tsekeridis, P. Papadopoulos University of Ioannina, Ioannina, Greece</p>
P1.44	<p>Titanate nanotubes nanocomposites with S and N doped graphite oxide: upgrading the selective photocatalytic oxidation of biomass-derived 5-hydroxymethylfurfural (HMF) A. Kotsaridou¹, D. A. Giannakoudakis¹, Z.-L. Koutsogianni¹, T. J. Bandosz², J. C. Colmenares³, K. S. Triantafyllidis^{1,4,*} ¹ Dept. of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece; ² Dept. of Chemistry and Biochemistry, The City College of New York, NY, USA ³ Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland; ⁴Center for Interdisciplinary Research and Innovation, Balkan Center, Thessaloniki, Greece</p>
P1.45	<p>Influence of Alloying Elements in the Base Material on the Mechanical Behavior of X70 HSLA Steel Welds ¹N. Bensaid, ¹M F. Benlamnouar, ¹T. Saadi, ²Y. Laib Dit Laksir, ¹A. boutaghane, ¹R. Badji ¹Research Center in Industrial Technologies CRTI, P.O.Box 64, Chéraga 16014, Algiers, Algeria; ² Institut d'électronique, Université constantine1, 25000, Constantine, Algérie.</p>
P1.46	<p>Planar defects in CoO_x-TiO₂ photonic crystals for enhanced visible light photocatalysis A. Toumazatou¹, E. Sakellis² and V. Likodimos¹ ¹ Section of Cond. Matter Physics, Dept. of Physics, National and Kapodistrian University of Athens, University Campus, 15 784, Greece ² Institute of Nanoscience and Nanotechnology, National Center for Scientific Research "Demokritos", 15341 Agia Paraskevi, Athens, Greece</p>
P1.47	<p>Enhancing the Electrical Performance of Fully Printed Flexible Organic Solar Cells via Molecular Doping A. Paliagkas¹, C. Stavrakis¹, C. Kapnopoulos¹, A. Zachariadis¹, V. Heben¹, E. Rabota¹, S. Logothetidis^{1,2}, A. Laskarakis¹ ¹Nanotechnology Lab LTFN, Dept. of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ²Organic Electronic Technologies P.C. (OET) 20th KM Thessaloniki - Tagarades, 57001 Thermi Greece - Thessaloniki (Greece)</p>
P1.48	<p>Catalytic performance and stability of Ru on Ce-based aminoclay carriers for Sabatier reaction A. Kaloudi¹, C. Drosou², K. Spyrou¹, P. Zygouri¹, I. V. Yentekakis^{2,3}, D. P. Gournis^{1*} ¹Dept. of Materials Science and Engineering, University of Ioannina, Ioannina, Greece; ²School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece. ³Institute of GeoEnergy, Foundation for Research and Technology-Hellas (FORTH/IG), Chania, GR.</p>
POSTERS 1	Materials synthesis, growth & fabrication processes

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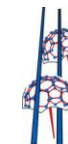


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P1.49	<p>“Accordion-like” Germanane: An “in-situ” HF Synthesis Y. Georgantas¹, T. Giouis², D. Gournis² and M. Bissett¹ <i>University of Manchester, Dept. of Materials, Henry Royce Institute, National Graphene Institute, Manchester (UK); University of Ioannina, Dept. of Materials Science and Engineering, Ioannina (GR)</i></p>
P1.50	<p>Novel synthetic route to Stibnite-Bismuthinite solid solution series as a candidate material for energy applications L.Theofylaktos^{1,2}, A. Kalafatis¹, S. Orfanoudakis¹, P. Dallas¹, G. Basina¹, K. Gkini¹, P. Tspas¹, E. Sekelis¹, V. Psycharis¹ and T. Stergiopoulos¹ ¹<i>Institute of Nanoscience and Nanotechnology, National Centre for Scientific Research “Demokritos”, 15310 Ag. Paraskevi, Athens, Greece</i> ²<i>Dept. of Chemistry, School of Natural Sciences, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece</i></p>
P1.51	<p>Plasmon-induced enhancement of Raman and photoluminescence by Ag nanostructures fabricated on SiNWs by MACE for the detection of biological substances. I. Kochylas¹, G. Geka³, A. Kanioura³, A. Dimitriou², M.A. Apostolaki¹, P. Petrou³, V. Likodimos¹, N. Papanikolaou², S. Gardelis¹ ¹<i>Section of Cond. Matter Physics, Dept. of Physics, National and Kapodistrian University of Athens, Panepistimiopolis, 15 784, Greece</i> ²<i>Institute of Nanoscience and Nanotechnology, National Center for Scientific Research “Demokritos”, 15341 Agia Paraskevi, Athens, Greece</i> ³<i>Institute of Nuclear & Radiological Sciences & Technology, Safety & Energy, National Center for Scientific Research “Demokritos”, 15341 Agia Paraskevi, Athens, Greece</i></p>
P1.52	<p>Formation of Copper Selenide Compounds by High Energy Ball Milling for Thermoelectric Applications V. Pavlidis¹, D. Stathokostopoulos¹, A. Teknetzi¹, E. Tarani¹, I. Karagiannis¹, N. Sidiropoulos¹, L. Malletzidou¹, Ch. Papoulia¹, N. Michailidis², T. Kehagias¹, G. Vourlias¹ ¹<i>School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece;</i> ²<i>School of Mechanical Engineering, Faculty of Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece</i></p>
P1.53	<p>Enhancement of Thermoelectric Bismuth Telluride and Antimony Telluride Compounds via Hot Deformation or Inclusion Introduction I. Karagiannis¹, D. Stathokostopoulos¹, A. Teknetzi¹, D. Karfaridis¹, V. Pavlidis¹, N. Sidiropoulos¹, Ch. Papoulia¹, S. Hadjipanteli², L. Malletzidou¹, I.K. Sfampa³, Th. Kyratsi² and G. Vourlias¹ ¹<i>School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece;</i> ²<i>Dept. of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia 1678, Cyprus;</i> ³<i>KLEEMANN Group R&D, Industrial Area of Kilkis, PO Box 25, Kilkis 611 00, Greece</i></p>
P1.54	<p>Integration of Microfluidics on Si based Biosensors for Heavy Ion Detection M.K. Filippidou¹, A. Kanaris¹, S. Douskas¹, E. Aslanidis², D. Tsoukalas², G. Tsekenis³, A. Tserepi¹, S. Chatzandroulis¹ ¹<i>Inst. of Nanoscience & Nanotechnology, NCSR “Demokritos”, Ag. Paraskevi, Greece;</i> ²<i>Dept. of Applied Sciences, NTUA, Zografou 15780, Greece;</i> ³<i>Biomedical Research Foundation of the Academy of Athens, 11527 Athens, Greece</i></p>
P1.55	<p>Fabrication of (Ti,Zr,Hf)NiSn Half Heusler via Mechanical Alloying G. Mesaritis¹, E. Hatzikraniotis² and Th. Kyratsi¹ ¹<i>Dept. of Mechanical and Manufacturing Engineering, University of Cyprus, 1678 Nicosia, Cyprus;</i> ²<i>Dept. of Physics, Aristotle University Thessaloniki, 54124, Thessaloniki, Greece</i></p>
P1.56	<p>AlN/GaN HEMTs grown on Si (111) substrates by PA-MBE A. Adikimenakis^{1,2}, K. Tsagaraki^{1,2}, P. Chatzopoulou⁴, Th. Kehagias⁴, G.P. Dimitrakopoulos⁴, A. Kostopoulos^{1,2,3}, M. Kayambaki^{1,2}, G. Konstantinidis^{1,2} and A. Georgakilas^{1,2} ¹<i>Microelectronics Research Group (MRG), IESL, FORTH, 71110 Heraklion, Greece;</i> ²<i>Dept. of Physics, University of Crete, P.O. Box 2208, GR-71003 Heraklion, Crete, Greece</i> ³<i>Dept. of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), GR-71410 Heraklion, Greece;</i> ⁴<i>Physics Dept., Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece</i></p>
POSTERS 1	Nanoscopia, nanostructure, and nanomechanics
P1.57	<p>Efficient optoacoustic transduction for ultra-high-frequency strain generation in nanostructured materials E. Kaniolakis-Kaloudis^{1,2}, K. Kaleris^{1,2}, E. Kaselouris^{1,2,4}, K. Kosma¹, Y. Orphanos^{1,2}, V. Dimitriou^{1,2}, M. Bakarezos^{1,2}, M. Tatarakis^{1,3}, N. A. Papadogiannis^{1,2} ¹<i>Institute for Plasma Physics and Lasers (IPPL), Hellenic Mediterranean University, Tria Monastiria, GR-74100 Rethymnon, Greece</i> ²<i>Physical Acoustics and Optoacoustics Laboratory, Dept. of Music Technology and Acoustics, Hellenic Mediterranean University, GR-74100 Rethymnon, Greece</i> ³<i>Dept. of Electronic Engineering, Hellenic Mediterranean University, GR-73133 Chalepa, Chania, Greece</i></p>

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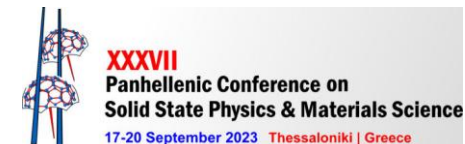


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P1.58	<p>Ag-WO₃/TiO₂ Photonic Crystal Film Substrates for Surface-Enhanced Raman Spectroscopy M.-A. Apostolaki¹, E. Sakellis², and V. Likodimos¹ ¹<i>Section of Cond. Matter Physics, Dept. of Physics, National and Kapodistrian University of Athens, University Campus, 15784, Greece</i> ²<i>Institute of Nanoscience and Nanotechnology, National Centre for Scientific Research "Demokritos", 15341 Agia Paraskevi, Athens, Greece</i></p>
P1.59	<p>Interfacial energies and strains in GaN/AlN superlattices Th. Karakostas¹, V. Pontikis² and Ph. Komninou¹ ¹<i>Physics Dept., Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece;</i> ²<i>Université Paris-Saclay, Commissariat à l'Energie Atomique et aux Energies Alternatives, IRAMIS, 91191 Gif-sur-Yvette, France</i></p>
P1.60	<p>Structural and Magnetic Properties of Iron Oxide Nanoparticles with Hollow Morphology: Exploring the surface effect. S. Slimani¹, M. Vasilakaki², E. Dolan³, K. N. Trohidou², N. Yaacoub⁴, D. Peddis¹ ¹<i>Dipartimento Di Chimica E Chimica Industriale, Università Degli Studi Di Genova, Via Dodecaneso 31, 1-16146 Genoa, Italy;</i> ²<i>Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", 15310 Agia Paraskevi, Attiki, Greece;</i> ³<i>CIC nanoGUNE BRTA, 20018 Donostia-San Sebastian, Basque Country, Spain;</i> ⁴<i>Dept. of Physics, Faculty of Science, Lebanese University, Beirut, Lebanon.</i></p>
P1.61	<p>Modulated structures in mPbS+NaSb₂ thermoelectric composites S. Kozakos¹, N. Vouroutzis¹, Ch. B. Lioutas¹, N. Frangis¹, T. J. Slade² and M. G. Kanatzidis² ¹<i>Dept. of Physics, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece;</i> ²<i>Dept. of Chemistry, Northwestern University, 2145 Sheridan Road, Evanston, Illinois 60208, United States</i></p>
P1.62	<p>L1₀-FePt ordered interlayers in Fe-Pt thin film heteroepitaxy I. Vaseiliadis¹, D. Karfaridis¹, G. Vourlias¹, G.P. Dimitrakopoulos¹, E. Th. Papaioannou^{1,2}, Th. Kehagias¹ ¹<i>Physics Dept., Aristotle University of Thessaloniki, Greece;</i> ²<i>Institute of Physics, Martin Luther Univ. Halle Wittenberg, Germany</i></p>
POSTERS 1	Low-dimensional materials, quantum materials & quasi-particles
P1.63	<p>Metal oxide thin films: Growth and tuning of band gap by quantum confinement effects A. Barnasas^{1,2}, C.S. Garoufalis¹, N.C. Diamantopoulos¹, D.I. Anyfantis¹, E.A. Ndoj¹, N. Bouropoulos¹, S. Baskoutas¹, and P. Pouloupoulos¹ ¹<i>Materials Science Dept., University of Patras, 26504 Patras, Greece;</i> ²<i>Creative Nano, Tatoiou 43, Metamorfofi, Athens 144 51, Greece</i></p>
P1.64	<p>Effect of growth conditions on the optical, vibrational, and structural properties of Cu₂O thin films E. Prountzou¹, E. Pavlidou¹, M. Zervos², and M. Katsikini¹ ¹<i>School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece;</i> ²<i>School of Engineering, University of Cyprus, Nicosia, Cyprus</i></p>
P1.65	<p>Effect of nitridation conditions on the micro/nanostructure and morphology of Ga₂O₃ nanowires D. Sapalidis¹, E. Pavlidou¹, F. Pinakidou¹, E. C. Paloura¹, M. Zervos², and M. Katsikini¹ ¹<i>School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece;</i> ²<i>School of Engineering, University of Cyprus, Nicosia, Cyprus</i></p>
P1.66	<p>G mode anharmonicity and electron-phonon coupling in doped CVD graphene crystals S. Katsiaounis^{1,2}, N. Delikoukos^{1,2}, A. Michail^{1,2}, J. Parthenios¹, K. Papagelis^{1,3} ¹<i>Foundation of Research and Technology Hellas, Institute of Chemical Engineering Sciences, Greece;</i> ²<i>Dept. of Physics, University of Patras, GR-26504 Patras, Greece</i> ³<i>School of Physics, Dept. of Solid-State Physics, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece</i></p>
P1.67	<p>Pseudoelectric and pseudomagnetic field in strained polycrystalline graphene: a theoretical study Z. G. Fthenakis^{1,2}, V. Tozzini^{1,2} ¹<i>Instituto Nanoscienze – CNR, Pisa, Italy;</i> ²<i>NEST, Scuola Normale Superiore, Pisa, Italy</i></p>

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P2.1	High pressure Raman study of crystalline fluoranthene S. Papastylanos ^{1,2} , N. Machín Padrón ^{1,3} , D. Christofilos ² , J. Arvanitidis ¹ ¹ Physics Dept., Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ² School of Chemical Engineering & Laboratory of Physics, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ³ Departamento de Física, Universidad de La Laguna, 38204 Tenerife, Spain
P2.2	Mechanochemical dehydration of carbamazepine dihydrate by Neat and Polymer-Assisted Grinding (POLAG). Ch. Moutroupidis , A. Tsiixerli, A. Koutsodimos, K. Kachrimanis Laboratory of Pharmaceutical Technology, School of Pharmacy, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
P2.3	Amorphous Solid Dispersion of Glibenclamide in Polymeric Interpolyelectrolyte Complexes by Polymer-Assisted Grinding (PolAG). A. Tsiixerli , K. Kachrimanis Laboratory of Pharmaceutical Technology, School of Pharmacy, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
P2.4	Elastic constants calculation of sildenafil citrate: a comparison between force field methods and accurate dispersion-corrected DFT G. Nikoulis ¹ , S. Nikidis ¹ , A. Tsiixerli ² , Ch. Moutroupidis ² , J. Kioseoglou ¹ , K. Kachrimanis ² ¹ School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ² School of Pharmacy, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
P2.5	Fabrication and characterisation of gelatin methacrylate bioprinted scaffolds loaded with alkannin/shikonin derivatives for soft tissue engineering applications E. Aslanidou ¹ , K. Theodoridis ¹ , A. Arampatzis ^{1,2} , V. Papageorgiou ³ , A. Assimopoulou ^{1,2} ¹ Laboratory of Organic Chemistry, School of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece; ² Natural Products Research Center of Excellence (NatPro-AUTH), Center for Interdisciplinary Research and Innovation of Aristotle University of Thessaloniki, Thessaloniki 57001, Greece; ³ IATRON HELLAS I.K.E., Fragkini 9, Thessaloniki 54624, Greece
P2.6	Curcumin-loaded poly(ϵ-caprolactone) and poly(lactic acid) three-dimensional printed scaffolds for bone tissue engineering applications G. Liasi ¹ , C. Pliakou ¹ , K. Theodoridis ¹ , A. Arampatzis ^{1,2} , E. Kyrilas ³ , E. Kampasakali ³ , I. Tsvintzelis ⁴ , L. Tsalikis ⁵ , P. Barmpalexis ^{2,6} , D. Christofilos ³ , A. Assimopoulou ^{1,2,*} ¹ Laboratory of Organic Chemistry, School of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece; ² Natural Products Research Center of Excellence (NatPro-AUTH), Center for Interdisciplinary Research and Innovation of Aristotle University of Thessaloniki, Thessaloniki 57001, Greece; ³ Faculty of Engineering, School of Chemical Engineering & Physics Laboratory, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece; ⁴ Laboratory of Physical Chemistry, School of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece; ⁵ School of Dentistry, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece; ⁶ Laboratory of Pharmaceutical Technology, School of Pharmacy, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece
P2.7	Synthesis of new hybrid material with bioactive and antibacterial properties for biomedical applications A. N. Lekidou ¹ , X. Chatzistavrou ¹ ¹ Dept. of Chemical Engineering, Aristotle University of Thessaloniki, Greece
P2.8	Silver-Releasing Bioactive Nanoparticles for Infected Tissue Regeneration Ag-BGNs R. Groudou ¹ , X. Chatzistavrou ¹ ¹ Dept. of Chemical Engineering, Aristotle University of Thessaloniki, Greece
P2.9	Structural stability of <i>trans</i>-cinnamic acid crystals under pressure probed by Raman spectroscopy V. Christopoulou ^{1,2} , A. Marinopoulou ² , O. Karabinaki ³ , D. Christofilos ³ , J. Arvanitidis ¹ ¹ Physics Dept., Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ² Dept. of Food Science and Technology, International Hellenic University, 57400 Thessaloniki, Greece ³ School of Chemical Engineering & Laboratory of Physics, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
P2.10	Exploring the Morphology and Structure of Hemocompatible Cerium Oxide Nanoparticles through Transmission Electron Microscopy N. Florini ¹ , M. E. Ioannou ² , G. K. Pouroutzidou ^{1,2} , I. Chatzimentor ² , I. Tsamesidis ² , I. Tsiaoussis ¹ , E. Lymperaki ³ , E. Kontonasaki ² , Ph. Komninou ¹ ¹ Physics Department, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ² Department of Prosthodontics, School of Dentistry, Faculty of Health Sciences, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ³ Department of Biomedical Sciences, International Hellenic University, 57400 Thessaloniki, Greece

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P2.11	<p>Raman spectroscopic evaluation of drug content uniformity and extrusion effects on ibuprofen-loaded polylactic acid filaments for 3D printed scaffolds E. Kyriilas¹, E. Kampasakali¹, A. Assimopoulou^{2,3}, D. Christofilos¹ ¹Aristotle University of Thessaloniki, Faculty of Engineering, School of Chemical Engineering & Physics Laboratory, 54124 Thessaloniki, Greece ²Aristotle University of Thessaloniki, School of Chemical Engineering, Laboratory of Organic Chemistry, 54124 Thessaloniki, Greece ³Center for Interdisciplinary Research and Innovation, Aristotle University of Thessaloniki, Natural Products Research Centre of Excellence (NatPro-AUTH), 57001 Thessaloniki, Greece</p>
P2.12	<p>Synthesis and characterization of calcium phosphates from eggshells for use as biomaterials N. Pagonis¹, D. Flegkas¹, A. Stimoniari¹, K. Kountouras¹, K. Christoforidis², C. Tsanaktisidis¹, V. Karayannis¹ ¹Dept. of Chemical Engineering, University of Western Macedonia, Greece; ²Dept. of Environmental Engineering, Democritus University of Thrace, Xanthi, Greece</p>
P2.13	<p>Raman spectroscopic study of functionalized magnetite nanoparticles for biomedical applications D. Vaso^{1,2}, C. M. Antoniou³, A. S. Arampatzis^{3,4}, M. Angelakeris¹, A. N. Assimopoulou^{3,4}, D. Christofilos² ¹Physics Dept., Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ²School of Chemical Engineering & Physics Laboratory, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ³Laboratory of Organic Chemistry, School of Chemical Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ⁴Center for Interdisciplinary Research and Innovation of Aristotle University of Thessaloniki, Natural Products Research Center of Excellence (NatPro-AUTH), 57001 Thessaloniki, Greece</p>
P2.14	<p>Raman identification of the main constituents of the essential oil directly from the leaf glands of <i>Origanum</i> plants G. Grigoriou¹, E. Kampasakali¹, A. Nakas^{2,4}, D. Mertzani^{3,4}, S. Kokkini^{3,4}, A. Assimopoulou^{2,4} and D. Christofilos¹ ¹Aristotle University of Thessaloniki, Faculty of Engineering, School of Chemical Engineering & Physics Laboratory, 54124 Thessaloniki, Greece ²Aristotle University of Thessaloniki, School of Chemical Engineering, Laboratory of Organic Chemistry, 54124 Thessaloniki, Greece ³Aristotle University of Thessaloniki, School of Biology, Laboratory of Systematic Botany and Phytogeography, 54124 Thessaloniki, Greece ⁴Center for Interdisciplinary Research and Innovation, Aristotle University of Thessaloniki, Natural Products Research Centre of Excellence (NatPro-AUTH), 57001 Thessaloniki, Greece</p>
P2.15	<p>High Pressure Raman study of α-keratin A. M. Paschou¹, D. Christofilos², J. Arvanitidis¹, M. Katsikini¹ ¹Department of Condensed Matter and Materials Physics, School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ²School of Chemical Engineering & Laboratory of Physics, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
P2.16	<p>High pressure response of ibuprofen studied by Raman spectroscopy A. Marinopoulou¹, E. Kyriilas², A. Ioannidis¹, N. Sorogas³, J. Arvanitidis³, D. Christofilos² ¹Department of Food Science and Technology, International Hellenic University, 57400 Thessaloniki, Greece; ²School of Chemical Engineering & Laboratory of Physics, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; ³Physics Department, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
P2.17	<p>Study of bio-pigments by Raman spectroscopy: the case of mollusc shells and crustacean exoskeletons E. Proiou¹, A. Staikou², E. Paloura¹, M. Katsikini¹ ¹Aristotle University of Thessaloniki, School of Physics, Section of Condensed Matter and Materials Physics, 54124 Thessaloniki, Greece ²Aristotle University of Thessaloniki, School of Biology, Department of Zoology, 54124 Thessaloniki, Greece</p>
POSTERS 2	Soft matter, polymers & composites
P2.18	<p>Mechanical Performance of Biodegradable Fibrous Nanocomposites Incorporating Magnetic Nanoparticles Ch. Christou¹, P. Papaphilippou¹, T. Krasia – Christoforou¹ ¹Dept. of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia, Cyprus.</p>
P2.19	<p>Non-equilibrium Effects of Polymer Dynamics under Nanometer Confinement: Effects of Architecture and Molar Mass P. Kardasis¹, G. Sakellariou², M. Steinhart³, G. Floudas^{1,4} ¹Dept. of Physics, University of Ioannina, 45110 Ioannina, Greece; ²Dept. of Chemistry, National and Kapodistrian University of Athens, 15771 Athens, Greece ³Institut für Chemie neuer Materialien, Universität Osnabrück, D-49069 Osnabrück, Germany ⁴University Research Center of Ioannina (URCI) - Institute of Materials Science and Computing, 45110 Ioannina, Greece</p>

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P2.20	<p>Self-assembly and dynamics of Poly(γ-benzyl-L-glutamate) homopolymers and its copolymers with polyisobutylene under 2D Confinement M. Spyridakou¹, K. Tsimenidis², M. Gkikas², M. Steinhart³, R. Graf⁴, G. Floudas^{1,4,5}</p> <p>¹Dept. of Physics, University of Ioannina, P. O. Box 1186, 451 10 Ioannina, Greece; ²Dept. of Chemistry, University of Lowell, Massachusetts, Lowell, MA 01854 ³Institut für Chemie neuer Materialien, Universität Osnabrück, D-49069 Osnabrück, Germany; ⁴Max Planck Institute for Polymer Research, 55128 Mainz, Germany ⁵University Research Center of Ioannina (URCI) - Institute of Materials Science and Computing, 451 10 Ioannina, Greece</p>
P2.21	<p>Magneto-dielectric Response of Hybrid Ferrite/BaTiO₃/Epoxy Nanocomposites A. C. Patsidis¹, G. C. Manika¹, S. Gioti¹, A. Sanida¹, N. Petropoulos², A. Kanapitsas², C. Tsonos², Th. Speliotis³, G. C. Psarras¹</p> <p>¹Smart Materials & Nanodielectrics Laboratory, Dept. of Materials Science, School of Natural Sciences, University of Patras, Patras 26504, Greece ²Dept. of Physics, University of Thessaly, Lamia, Greece; ³Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Athens 15310, Greece</p>
P2.22	<p>How Water Crystallizes in Aqueous Alcohol Solutions? V. Moschos¹, M. Steinhart², G. Floudas^{1,3}</p> <p>¹Dept. of Physics, University of Ioannina, 45110 Ioannina, Greece; ²Institut für Chemie neuer Materialien, Universität Osnabrück, D-49069 Osnabrück, Germany ³University Research Center of Ioannina (URCI) - Institute of Materials Science and Computing, 45110 Ioannina, Greece</p>
P2.23	<p>On the effects of strain gradients on spinodal decomposition G. Petsos</p> <p>Dept. of Physics, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece</p>
P2.24	<p>Dielectric and optical anisotropy of difluoroterphenyl liquid crystal dimers P. Kapsali¹, G. Zaftis¹, E.E. Zavvou¹, E. Ramou¹, Z. Ahmed², C. Welch², G.H. Mehl², C.A. Krontiras¹, P.K. Karahaliou¹</p> <p>¹ Dept. of Physics, University of Patras, 26504 Patras, Greece; ² Dept. of Chemistry, University of Hull, HU6 7RX, UK</p>
P2.25	<p>Dielectric behavior and Thermomechanical properties of Epoxy-based Composites with Titanium Carbonitride nanoparticles N.G. Ploumis, A.C. Patsidis , G.C. Psarras</p> <p>Smart Materials & Nanodielectrics Laboratory, Dept. of Materials Science, School of Natural Sciences, University of Patras, Patras 26504, Greece</p>
P2.26	<p>Synthesis and Characterization of Epoxy/CaCO₃ Nanocomposites for Enhanced Dielectric and Thermomechanical Performance A. E. Doukas, A. C. Patsidis, G. C. Psarras</p> <p>Smart Materials & Nanodielectrics Laboratory, Dept. of Materials Science, School of Natural Sciences, University of Patras, Patras 26504, Greece</p>
P2.27	<p>Temperature dependence of the photoluminescence of the coordination polymer K₂[Ru(bipy)(CN)₄].xH₂O O. Karabinaki¹, D. Kouskouki², T. Lazarides², D. Christofilos¹</p> <p>¹School of Chemical Engineering & Laboratory of Physics, Faculty of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ²Laboratory of Inorganic Chemistry, Dept. of Chemistry, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
P2.28	<p>Bio-inspired additively manufactured 3D structures for enhanced impact energy dissipation A. Argyros^{1,2}, G. Maliaris³, E. Smyrnaiois¹, N. Michailidis^{1,2}</p> <p>¹ Physical Metallurgy Laboratory, Mechanical Engineering Dept., School of Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ² Centre for Research & Development of Advanced Materials (CERDAM), Center for Interdisciplinary Research and Innovation, Balkan Centre, Building B', 10th km Thessaloniki-Thermi Road, 57001 Thessaloniki, Greece; ³ Additive Manufacturing Laboratory, Dept. of Chemistry, School of Science, International Hellenic University, 65404 Kavala, Greece</p>
P2.29	<p>Doping the nematic phases of bent-core particles doped with spherical nano-colloids: a computer simulation study. D. Reyes¹, F. Priftis¹, M. Dori^{1,2}, P. K. Karahaliou², A. G. Vanakaras¹</p> <p>¹ Department of Materials Science, University of Patras, Greece; ² Department of Physics, University of Patras, Greece</p>
P2.30	<p>Structure and symmetries of chiral nematics from achiral particles. A computer simulation study D. Reyes, D. Photinos, A. G. Vanakaras</p> <p>Department of Materials Science, University of Patras, Greece</p>

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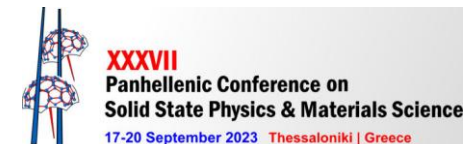


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P2.31	<p>Trap stiffness calibration of optical tweezers using the equipartition method T. Giannakis^{1,2}, M. Kandyła¹ ¹ National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48 Vasileos Constantinou Avenue, 11635 Athens, Greece ² National and Kapodistrian University of Athens, Dept. of Physics, University Campus, Zografou, 15784 Athens, Greece Address-2</p>
P2.32	<p>Photolithography effects in Metal/Al₂O₃/ p-Si and p-Ge MOS structures G. Rellias¹, S.-D. Mantas¹, A. Chrysanthopoulos¹, S.-V. Sampaziotis¹, V. Ioannou-Sougleridis², B. Péc³, N.Z.Vouroutzis⁴, J. Stoemenos⁴, D. Skarlatos¹ ¹ Dept. of Physics, University of Patras, 26500 Patras, Greece; ² Institute of Nanoscience and Nanotechnology, NCSR "Demokritos," 153 41 Athens, Greece ³ Institute for Technical Physics and Materials Science, Centre for Energy Research, EK MFA, 1121 Budapest, Hungary; ⁴ Dept. of Physics, Aristotle University of Thessaloniki, 54006 Thessaloniki, Greece</p>
P2.33	<p>Optimizing Fabrication and Performance of Liquid-Processed Carbon Nanotube Photodetectors on Various Substrates V. Lionas^{1,2}, D. Velessiotis^{1,4}, G. Pilatos¹, K. Giannakopoulos¹, A. Kyriakis³, D. Skarlatos², N. Glezos¹ ¹ Institute of Nanoscience and Nanotechnology, National Center for Scientific Research Demokritos, Athens, Greece; ² Dept. of Physics, University of Patras, 265 00 Patras, Greece ³ Institute of Nuclear and Particle Physics, National Center for Scientific Research Demokritos, Agia Paraskevi Attikis, P.O.Box 60037, 153 10 Athens, Greece; ⁴ University of West Attica, 122 41 Egaleo, Greece</p>
P2.34	<p>Graphite/SiO₂ film electrodes modified with hybrid organic-inorganic perovskites and/or AgNPs for monitoring drugs and metabolites used in arterial hypertension treatment G. Papanthidis¹, E. Chountala¹, J. Matsoukas², I. Koutselas¹ and E. Topoglidis¹ ¹ Materials Science Dept., University of Patras, 26504 Patras, Greece ² NewDrug, P.C., Patras Science Park, 26504 Patras, Greece</p>
P2.35	<p>Functionalized porphyrin with two amino groups as electron transport layer in highly efficient green OLEDs A. Verykios¹, G. Papadimitropoulos^{1,2}, A. Kaidatzis¹, D. Fotaki³, E.-I. Petridou³, K. Maskanaki³, E. Evangelou³, S. Kaminaris¹, P. Argitis¹, A. Soultati^{1,2} ¹ Institute of Nanoscience and Nanotechnology, National Center for Scientific Research Demokritos, Agia Paraskevi, 15310 Athens, Greece ² Dept. of Electrical and Electronics Engineering, University of West Attica, P. Ralli & Thivon 250, 12244, Aegaleo, Greece ³ Dept. of Physics, University of Ioannina, 45110 Ioannina, Greece</p>
P2.36	<p>Investigation of the enhancement of the nanomechanical properties of PEDOT:PSS transparent electrodes by the addition of silver nanoparticles A. Kostopoulou, S. Kassavetis, C. Kapnopoulos, S. Logothetidis, A. Laskarakis Lab for Thin Films, Nanobiomaterials, Nanosystems & Nanometrology (LTFN), Physics Dept., Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece</p>
P2.37	<p>Analysis of low-dimensional electric current noise in nano-transistors using Visibility Graphs I.P. Antoniadou¹, M.P. Haniyas², S.G. Stavriniades², L. Magafas² and D. Tassis¹ ¹ School of Physics, Dept. of Applied & Environmental Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece. ² Physics Dept., International Hellenic University, Kavala, Greece</p>
P2.38	<p>Electrical characterization of efficient green OLEDs. Use of various electron transport layers and effects of deep electron traps. K. Maskanaki¹, D. Fotaki¹, E. I. Petridou¹, A. Soultati², A. Verykios², M. Vasilopoulou², E. K. Evangelou¹ ¹ Dept. of Physics, University of Ioannina, 45110 Ioannina, Greece ² Institute of Nanoscience and Nanotechnology, National Center for Scientific Research Demokritos, Agia Paraskevi, 15310 Athens, Greece ³ Max Planck Institute of Microstructure Physics, 06120 Halle, Germany</p>
P2.39	<p>Investigating Source and Drain Terminal Sensitivity in an Analytical Threshold Voltage Model for Triple-Gate Junctionless Transistors M. Nakos¹, A. Tsormpatzoglou¹, C. T. Angelis and C. A. Dimitriadis² ¹ Dept. of Informatics and Telecommunications, University of Ioannina, Arta, Greece. ² Dept. of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki Greece.</p>

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P2.40	<p>Enhancing Performance and UV-Stability of Printed Organic Solar Cells through Electron Transport Layer Optimization E. Doudis¹, A. Zachariadis¹, C. Kapnopoulos¹, E. Mekeiridis², D. Tselekidou¹, A. Laskarakis¹, S. Logothetidis^{1,2} ¹Lab for Thin Films - Nanobiomaterials - Nanosystems & Nanometrology (LTFN); Dept. of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ²Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, 57001 Themi, Greece</p>
P2.41	<p>On-edge engine-shaft telemetry for large vessels with ultra-sensitive Al₂O₃ and Pt-nanoparticle based strain sensor G. Kleitsiotis¹, P. Bousoulas¹, V. Aslanidis¹, G. Rousopoulos², Ch. Papadopoulos², D. Tsoukalas¹ ¹School of Applied Mathematical and Physical Sciences, NTUA ; ²School of Maritime Mechanical Engineering, NTUA</p>
POSTERS 2	Functional materials & nanotechnology
P2.42	<p>Sol-gel Synthesis of TiO₂ Thin Films for Photocatalytic Applications T. Giannakis^{1,2}, G. A. Mousdis¹, S-K Zervou³, A. Hiskia³, T. Triantis³, C. Christophoridis⁴, E. Bizani⁴, D. Iossifidis⁴, M. Kandyla¹ ¹National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48 Vasileos Constantinou Avenue, 11635 Athens, Greece; ²National and Kapodistrian University of Athens, Dept. of Physics, University Campus, Zografou, 15784 Athens, Greece Address-2; ³Institute of Nanoscience and Nanotechnology (INN), NCSR Demokritos, Athens, Greece ⁴Greener than Green Technologies S.A., 13 Ilission St., 14564, Kifisia, Athens</p>
P2.43	<p>Development of Cu₂O/ZnS hybrids: hydrothermal synthesis, physicochemical characterization and photocatalytic activity E. Mastora¹, V. Schoina¹, A. Katsamitros¹, N. Karamoschos¹, D. Tasis^{1,2} ¹Dept. of Chemistry, University of Ioannina, 45110 Ioannina, Greece; ²University Research Center of Ioannina (URCI), Institute of Materials Science and Computing, 45110 Ioannina, Greece</p>
P2.44	<p>PtSe₂/graphene hybrids for potential energy applications I.M. Oikonomou^{1,2,3}, A. Koutsoukis^{1,2}, C. Downing¹, T. Brumme³, Z. Sofer⁴, T. Heine^{3,5}, V. Nicolosi^{1,2} ¹Advanced Microscopy Laboratory, CRANN and AMBER, Dublin 2, Ireland; ²Trinity College Dublin, School of Chemistry, Dublin 2, Ireland; ³TU Dresden, Chair of Theoretical Chemistry, Dresden, Germany; ⁴University of Chemistry and Technology Prague, Dept. of Inorganic Chemistry, Prague, Czech Republic; ⁵Helmholtz Zentrum Dresden-Rossendorf, Institute of Resource Ecology, Leipzig, Germany</p>
P2.45	<p>AC Electrical measurements on nanocomposite magnetic 3D printing filaments: indications for supersonic strain oscillations I. Samaras¹, A. Alexandridis^{1,2}, A. Makridis^{1,2}, M. Angelakeris^{1,2} ¹Dept. of Cond. Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece; ²Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece</p>
P2.46	<p>Assessment of the structural alterations of modified Tensylon® after ballistic resistance tests S. Roufas¹, Z. Lada¹, A. Soto Beobide¹, Ch. Kostagiannakopoulou², S Tsantzalis², K. S. Andrikopoulos^{1,3}, V. Kostopoulos^{1,2}, G.A. Voyiatzis¹ ¹FORTH/ICE-HT, Stadiou Str, GR-26504 Rio-Patras, Greece; ²Dept. of Mechanical Engineering & Aeronautics, University of Patras; GR-26504 Rio-Patras, Greece; ³Dept. of Physics, University of Patras, GR-26504 Rio-Patras, Greece</p>
P2.47	<p>Multiphoton Laser Ablation using methacrylic polymer thin films doped with Silver nanoparticles K. Karachousos-Spiliotakopoulos¹, V. Tangoulis¹, A. Sinani^{2,3}, C. Riziotis², T. Manouras^{4,5}, E. Angelakos⁵ ¹Laboratory of Inorganic Chemistry, Dept. of Chemistry, University of Patras, Patras, 26504, Greece; ²Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, 11635, Greece; ³Dept. of Informatics and Computer Engineering, University of West Attica, Egaleo, 12243, Greece; ⁴Institute of Electronic Structure and Laser, FORTH, Heraklion, 71110, Greece; ⁵Opticon ABEE, Tripoli-Peloponnesus, 22100, Greece</p>
P2.48	<p>Multiphoton Laser Ablation using methacrylic polymer thin films doped with iron oxide magnetic nanoparticles and perylene molecules. K. Karachousos-Spiliotakopoulos¹, V. Tangoulis¹, A. Sinani^{2,3}, C. Riziotis², T. Manouras^{4,5}, E. Angelakos⁵ ¹Laboratory of Inorganic Chemistry, Dept. of Chemistry, University of Patras Patras, 26504, Greece; ²Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, 11635, Greece; ³Dept. of Informatics and Computer Engineering, University of West Attica, Egaleo, 12243, Greece; ⁴Institute of Electronic Structure and Laser, FORTH, Heraklion, 71110, Greece; ⁵Opticon ABEE, Tripoli-Peloponnesus, 22100, Greece</p>

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P2.49	<p>Multi-functional CaAl₂O₄ particles with combined extended radiation and magnetic properties G. Kastrinaki¹, S. T. Tsantis², V. Zaspalis^{1,3}, C. Sarafidis⁴, C. Chatzidoukas³, S. N. Yannopoulos² ¹Chemical Process and Energy Resources Institute/CERTH, 57001, Themi, Thessaloniki; ²FORTH, Institute of Chemical Engineering Sciences/FORTH, Stadiou, 26504, Platani, Patra ³Chemical Engineering Dept., AUTH, 54124, Thessaloniki; ⁴Physics Dept., AUTH, 54124, Thessaloniki</p>
P2.50	<p>Color tuning of plasmonic metasurfaces fabricated by Nanoimprint lithography. N. Dimogerontaki^{1,2}, N. Matthaiaakakis², N. Papanikolaou², N. Kehagias² ¹Dept. of Physics, School of Applied Mathematical and Physical Sciences National Technical University of Athens, Zografou Campus, GREECE ²NCSR Demokritos, Institute of Nanoscience & Nanotechnology, P. Grigoriou 27 & Neapoleos Str., 15341 Ag. Paraskevi, Greece</p>
P2.51	<p>Biocompatibility Experiments of Albumin & Fibrinogen on Conductive Titanium Nitride Nanocomposites T. Odutola¹, N. Pliatsikas¹, S. Panos¹, I. Fekas¹, S. Kassavetis¹, M. Gioti¹, P. Patsalas¹ ¹Physics Dept., Aristotle University Of Thessaloniki - Thessaloniki (Greece)</p>
P2.52	<p>Photocatalytic performance of immobilized ZnO nanoparticles in electrospun PA6 fibrous membranes M. Kaminiotis¹, A. Souliotis¹, P. Rysanek³, J. Orava⁴ and S. N. Yannopoulos^{1,2} ¹ Foundation of Research and Technology Hellas- Institute of Chemical Engineering Sciences (FORTH/ICE-HT), P.O. Box 1414, GR 26504, Rio-Patras, Greece ² Dept. of Chemistry, University of Patras, GR-26504, Rio-Patras, Greece; ³ Faculty of Science, J. E. Purkyne University in Usti nad Labem, 40096 Usti nad Labem, Czech Republic ⁴ Faculty of Environment, J. E. Purkyne University in Usti nad Labem, 40096 Usti nad Labem, Czech Republic</p>
P2.53	<p>Nanostructured ZnSnO₃ for conductometric room temperature gas sensors E. Mantsiou¹, E. Gagaoudakis¹, A. Sfakianou^{1,2} and V. Binas^{1,2} ¹ Foundation of Research and Technology - Hellas, Institute of Electronic Structure & Laser (FORTH-IESL), Heraklion Greece; ² Dept. of Physics, University of Crete, Greece</p>
P2.54	<p>Graphene based multifunctional and ultra-response capacitive humidity sensors G. Paterakis^{1,2}, S. Matsalis^{1,2}, E. Vaughan³, G. Anagnostopoulos¹, G. Gorgolis^{1,2}, N. Koutroumanis¹, D. Iacopino³, C. Galiotis^{1,2} ¹Institute of Chemical Engineering Sciences, Foundation of Research and Technology-Hellas (FORTH/ICE-HT), Patras, Greece; ²Dept. of Chemical Engineering, University of Patras, 26504 Patras, Greece; ³Tyndall National Institute, University College Cork, Dyke Parade, T12 R5CP Cork, Ireland</p>
P2.55	<p>Elaboration and characterization of new nanomaterial based on Aluminum alloy powder reinforced by Titanium carbide M.F. Benlamnouar, N. Bensaid, S. Tahar Research Center in Industrial Technologies CRTI, Cheraga 16014, Algiers, Algeria</p>
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P2.56	<p>Mechanical and thermal properties of spinel refractories mixed with blast furnace waste slag Ai. Symvoulidou^{1,2}, George Vekinis¹ ¹Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Agia Paraskevi, Greece; ²Dept. of Physics, University of Ioannina, Ioannina, Greece</p>
P2.57	<p>Study of volcanic minerals using Mössbauer spectroscopy A. Oikonomou, C. Sarafidis School of Physics, Aristotle University, 54124 Thessaloniki, Greece</p>
P2.58	<p>Understanding the luminescence and afterglow properties in CaAl₂O₄:Eu²⁺, Nd³⁺ phosphors: The role of the Nd³⁺ ions S.T. Tsantis¹, V. Drakopoulos¹, C. Chatzidoukas² and S.N. Yannopoulos^{1,3} ¹Foundation for Research and Technology Hellas, Institute of Chemical Engineering Sciences (FORTH/ICE-HT), Patras, Greece; ²Dept. of Chemical Engineering, Aristotle University of Thessaloniki (AUTH), 54124, Thessaloniki, Greece; ³Dept. of Chemistry, University of Patras, GR-26504, Rio-Patras, Greece</p>

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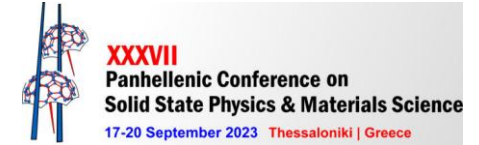
POSTERS PROGRAM



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P2.59	<p>Characterization of novel aluminosilicate refractories with the addition of nanoparticles <u>S. Gkiouzel</u>¹, K. C. Vasilopoulos¹, I. Kitsou², E. Roussi², A. Tsetsekou², M.A. Karakassides¹, S. Agathopoulos¹ ¹Dept. of Materials Science and Engineering, University of Ioannina, GR-451 10 Ioannina, Greece ²School of Mining Engineering and Metallurgy, National Technical University of Athens, GR-15780, Athens, Greece</p>
P2.60	<p>Effect of SiO₂ -nanoparticles addition on the physical and mechanical properties of clay roof tiles <u>S. Gkiouzel</u>¹, K.C. Vasilopoulos¹, S. Panagiotopoulos², S. Agathopoulos¹, M.A. Karakassides¹ ¹Dept. of Materials Science and Engineering, University of Ioannina, GR-45110, Ioannina, Greece; ²Panagiotopoulos S.A. Douneika Ilika, GR-27200 Amalias, Greece</p>
POSTERS 1	Interdisciplinary condensed-matter physics
P2.61	<p>Revealing Biochemical Differences Between Cancerous and Healthy Human Colorectal Tissues by Micro-Raman Spectroscopy <u>M. Karnachoriti</u>^{1,2}, I. Stathopoulos³, M. Kouri^{2,3}, E. Spyratou^{2,3}, M. Panagopoulou¹, E. P. Efsthathopoulos³, I. Seimenis⁴, Y. S. Raptis¹, A. G. Kontos¹ ¹ School of Applied Mathematical and Physical Sciences, National Technical University Athens, 15780 Zografou, Athens, Greece; ² Dept. of Medicine, Democritus University of Thrace, 68100 Alexandroupolis, Greece; ³2nd Dept. of Radiology, Medical School, National & Kapodistrian University of Athens, 15772 Athens, Greece; ⁴ Medical School, National and Kapodistrian University of Athens, 11527 Athens, Greece</p>
P2.62	<p>The Holy Trinity Portable Icon from Kavakli: Characterization Analysis for Materials and Technique Identification D. Koronas, E. Pavlidou, <u>L. Malletzidou</u> School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece</p>
P2.63	<p>A new technique for the characterization of electron transition pathways between excited states <u>P. G. Konstantinidis</u>¹, E. Tsoutsoumanos^{2,3}, G.S. Polymeris², G. Kitis¹ ¹Aristotle University of Thessaloniki, Physics Dept., Nuclear Physics and Elementary Particles Physics Section, GR-54124, Thessaloniki, Greece; ²Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", GR-15310, Ag. Paraskevi, Athens, Greece; ³Cond. Matter Physics Laboratory, Physics Dept., University of Thessaly, GR-35100, Lamia, Greece)</p>
P2.64	<p>Study of consolidants use in textile conservation D. Koronas, <u>L. Malletzidou</u>, T. Zorba, E. Pavlidou School of Physics, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece</p>
P2.65	<p>Wall mosaics of Thessaloniki: A comparative study of the brown tesserae <u>M.Kyranoudi</u>¹, L. Malletzidou¹, T.Zorba¹, G.Vourlias¹, V.Melfos², E.Pavlidou¹, K.Chrysafis¹ ¹Laboratory of Advanced Materials and Devices, School of Physics, Faculty of Sciences, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece ²Dept.of Mineralogy, Petrology, Economic Geology, School of Sciences, Faculty of Geology, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece</p>
P2.66	<p>Agricultural Plastics: Recent Developments in Waste management and Recycling <u>M. I. Kotzabasaki</u>, C. Maraveas, T. Bartzanas Farm Structures Lab., Department of Natural Resources and Agricultural Engineering, Agricultural University of Athens, 11855 Athens, Greece</p>

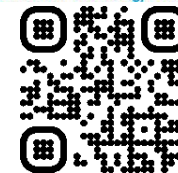
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