

Lista de publicatii

CARTI SAU
CAPITOLE

Adriana Marinoiu, Geanina Mihai, Oana Lazar, Sabrina Rosoiu, Mariana Prodana, Claudia Sisu, Mircea Raceanu, Marius Enachescu
"Nanomateriale – Proprietăți Funcționale și Aplicații; Facile Preparation of Graphene-Supported Platinum-Cobalt Nanoparticles and Their Use as Electrocatalyst in Pem Fuel Cells"
"Nanomaterials – Functional Properties and Applications" Ed. Academiei Romane (ISBN 978-973-27-3290-8) (2020).

Adriana Marinoiu, Mircea Raceanu, Elena Carcadea, Aida Pantazi, Raluca Mesterca, Oana Tutunaru, Simona Nica, Daniela Bala, Mihai Varlam, Marius Enachescu
"Noble Metal Dispersed on Reduced Graphene Oxide and Its Application in PEM Fuel Cells"
"Electrocatalysts for Fuel Cells and Hydrogen Evolution" InTech (ISBN 978-1-78984-812-0) (2018).

L. Anicai, A. Petica, S. Costovici, O. Brincoveanu, A. Ghiulnare Pantazi, D. Balan, M. Enachescu, T. Visan
"Metal and alloy composites with carbon nanomaterials coatings obtained by electrodeposition from deep eutectic solvents"
"NANOTECHNOLOGIES AND NANOMATERIALS FOR VARIOUS APPLICATIONS" Editura Academiei Romane (ISBN 978-973-27-2311-1) (2018).

Calin-Constantin Moise, Marius Enachescu
"High-Quality Carbon Nanomaterials Synthesized by Excimer Laser Ablation"
"Applications of Laser Ablation - Thin Film Deposition, Nanomaterial Synthesis and Surface Modification" InTech (ISBN 978-953-51-2812-0) (2016).

M Enachescu, R Vidu and I Opris
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"Recent Advances on the Modular Organization of the Cortex", Springer, (ISBN 978-94-017-9899-0), (2015).

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"Wetting Properties at Nanometer Scale"
"Wetting and Wettability", InTech, (ISBN 978-953-51-2215-9), (2015).

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"Pulsed Laser Ablation Synthesis of Carbon Nano-Structures: Effect of Target Composition and Laser Ablation Condition on Their Yield and Morphology"

"New applications of nanomaterials", Romanian Academy Publisher, (ISBN 978-973-27-2311-1), (2014).

M. Enachescu

"Nanoscale Effects of Friction, Adhesion and Electrical Conduction in AFM Experiments", InTech Publisher, In: "Atomic Force Microscopy - Imaging, Measuring and Manipulating Surfaces at the Atomic Scale", Victor Bellitto Ed., (ISBN 978-953-51-0414-8), (2012).

M. Enachescu and M. Salmeron

"Adsorption of P, S, As, Se, and Sb on metals, alloys and semiconductors"

"Physics of Covered Solid Surfaces", editor H. P. Bonzel; Landolt-Börnstein Series on Numerical Data and Functional Relationships in Science and Technology, Vol. III/42/A3, pp. 2-61

Springer-Verlag Berlin Heidelberg New York - Germany, (ISBN 3-540-44341-X), (2003).

M. Enachescu

"Atomic Resolution and Nanometer-Scale Structuring"

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Nanoporous anodic alumina layers obtained from novel deep eutectic solvent formulations

Fernandes, PMV; Brincoveanu, O; Pantazi, A; Petica, A; Pereira, CM; Silva, AF; Enachescu, M ; Anicai, L

TRANSACTIONS OF THE INSTITUTE OF METAL FINISHING, (2022)

Synthesis and Characterization of Coordination Compound [Eu(μ (2)-OC₂H₅)(btfa)(NO₃)(phen)](2)phen with High Luminescence Efficiency

Culeac, IP; Verlan, VI; Bordian, OT; Zubareva, VE; Iovu, MS; Bulhac, II; Siminel, NA; Siminel, AV; Mihai, G; Enachescu,

NANOMATERIALS, 12(16), (2022)

Synthesis and Characterization of Ti-Ta-Shape Memory Surface Alloys Formed by the Electron-Beam Additive Technique

Ormanova, M; Dechev, D; Ivanov, N; Mihai, G; Gospodinov, M; Valkov, S; Enachescu, M

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(CONTINUARE)**

Interaction of Mg Alloy with PLA Electrospun Nanofibers Coating in Understanding Changes of Corrosion, Wettability, and pH

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NANOMATERIALS, 12(8), (2022)

High Surface Area "3D Graphene Oxide" for Enhanced Sorption of Radionuclides

Boulanger, N; Kuzenkova, AS; Iakunkov, A; Nordenstrom, A; Romanchuk, AY; Trigub, AL; Zasimov, PV; Prodana, M; Enachescu, M; Bauters, S; Amidani, L; Kvashnina, KO; Kalmykov, SN; Talyzin, AV

ADVANCED MATERIALS INTERFACES, 9(18), (2022)

The Water-Based Synthesis of Platinum Nanoparticles Using KrF Excimer Laser Ablation

Lazar, OA; Moise, CC; Nikolov, AS; Enache, LB; Mihai, GV; Enachescu, M

NANOMATERIALS, 12(3), (2022)

Investigation of plasma-assisted functionalization of pristine single layer graphene

Tincu, B; Avram, M; Avram, A; Tucureanu, V; Mihai, G; Popa, M; Osiceanu, P; Demetrescu, I; Enachescu, M

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Realization of a polarization-insensitive optical frequency-domain reflectometer using an I/Q homodyne detection

Jderu, A; Soto, MA; Enachescu, M; Ziegler, D

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Surface Characterization of New Azulene-Based CMEs for Sensing

Anastasoae, V; Omocea, C; Enache, LB; Anicai, L; Ungureanu, EM; van Staden, JF; Enachescu, M

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"Assessing the structural properties of GexAsxSe1-2x chalcogenide systems through cross-correlated STEM, XRD and micro-Raman studies

Iaseniuc, OV; Iovu, MS; Pantazi, A; Lazar, OA; Moise, CC; Enachescu, M

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Surface Topography of Si/TiO₂ Stacked Layers on Silicon Substrate Deposited by KrF Excimer Laser Ablation

Moise, CC; Pantazi, A; Mihai, GV; Jderu, A; Bercu, M; Messina, AA; Enachescu, M

COATINGS, 11(11), (2021)

Polyazulene-Based Materials for Heavy Metal Ion Detection. 3. (E)-5-((6-t-Butyl-4,8-dimethylazulen-1-yl) diazenyl)-1H-tetrazole-Based Modified Electrodes

Enache, LB; Anastasoiaie, V; Lete, C; Brotea, AG; Matica, OT; Amarandei, CA; Brandel, J; Ungureanu, EM; Enachescu, M

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Electrodeposition of ternary Sn-Cu-Ni alloys as lead-free solders using deep eutectic solvents

Rosoiu, SP; Costovici, S; Moise, C; Petica, A; Anicai, L; Visan, T; Enachescu, M

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Preliminary Study on Light-Activated Antimicrobial Agents as Photocatalytic Method for Protection of Surfaces with Increased Risk of Infections

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Pulsed Laser Deposition of SWCNTs on Carbon Fibres: Effect of Deposition Temperature

Moise Calin, Rachmani Lidar, Geanina Mihai, Oana Lazar, Marius Enachescu, Naveh Naum,

POLYMERS, 13(7), 1138, (2021).

Characterization and electrochemical studies of MWCNTs decorated with Ag nanoparticles through pulse reversed current electrodeposition using a deep eutectic solvent for energy storage applications

Ana T. S. C. Brandão, Sabrina Rosoiu, Renata Costa, Oana Andreea Lazar, A. Fernando Silva, Liana Anicai, Carlos M. Pereira, Marius Enachescu.

Journal of Materials Research and Technology,
doi.org/10.1016/j.jmrt.2021.08.031 in press (2021)

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Characterization and electrochemical studies of MWCNTs decorated with Ag nanoparticles through pulse reversed current electrodeposition using a deep eutectic solvent for energy storage applications

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Journal of Materials Research and Technology, doi.org/10.1016/j.jmrt.2021.08.031 in press (2021)

Simulations of the Ultra-Fast Kinetics in Ni-Si-C Ternary Systems under Laser Irradiation

Salvatore Sanzaro, Corrado Bongiorno, Paolo Badalà, Anna Bassi, Ioannis Deretzis, Marius Enachescu, Giovanni Franco, Giuseppe Fisicaro, Patrizia Vasquez, Alessandra Alberti, Antonino La Magna.,

Materials, 14, 4769, (2021).

Swelling-Based Chemical Sensing With Unmodified Optical Fibers

Alin JDERU, Dorel DOROBANTU, Dominik ZIEGLER, Marius ENACHESCU,

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COORDINATION COMPLEX $[Eu(\mu_2-OC_2H_5)(btfa)(NO_3)(phen)]_2 \cdot phen$ WITH HIGH LUMINESCENT EFFICIENCY

Mihail S. Iovu, Victor I. Verlan, Ion P. Culeac, Olga Bordian, Vera E. Zubareva, Ion Bulhac, Marius Enachescu, Nichita A. Siminel, Anatol V. Siminel,

Moldavian Journal of the Physical Sciences, 20(1), (2021).

On the growth of copper oxide nanowires by thermal oxidation near the threshold temperature at atmospheric pressure

Moise Calin, Laura-Bianca Enache, Veronica Anastasoae, Oana Lazar, Geanina Mihai, Mircea Bercu, Marius Enachescu, Naveh Naum,

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Fabrication of Optical Fibers with Multiple Coatings for Swelling-Based Chemical Sensing

Dorel Dorobantu, Alin Jderu, Marius Enachescu, Ziegler Dominik,
Micromachines, 12, 941, (2021).

Joining Caffeic Acid and Hydrothermal Treatment to Produce Environmentally Benign Highly Reduced Graphene Oxide

Barra Ana, Lazar Oana, Pantazi Aida, Hortiguela Maria J., Otero-Irurueta, Gonzalo, Enachescu, Marius, Ruiz-Hitzky Eduardo, Nunes Claudia, Ferreira Paula,

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SENSORS, 21(3), 718, (2021).

Assessing the Functional Properties of TiZr Nanotubular Structures for Biomedical Applications, through Nano-Scratch Tests and Adhesion Force Maps

Vardaki Maria, Pantazi Aida, Demetrescu Ioana, Enachescu, Marius,
MOLECULES, 26(4), 900, (2021).

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High-Order Polynomial Fitting Assistance for Fast Double-Peak Finding in Brillouin-Distributed Sensing

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Detection of hydrogen peroxide involving bismuth nanowires via template-free electrochemical synthesis using deep eutectic solvents

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Nanomechanical properties of zirconium anodized in a mixture of electrolytes with fluoride ions

Pantazi Aida, Vardaki Maria, Mihai Geanina, Totea Georgeta, Demetrescu Ioana, Enachescu, Marius,
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Electrodeposition of NiSn-rGO Composite Coatings from Deep Eutectic Solvents and Their Physicochemical Characterization

Rosoiu Sabrina Patricia, Pantazi Aida Ghiulnare, Petica Aurora, Cojocaru Anca, Costovici Stefania, Zanella Caterina, Visan Teodor, Anicai Liana, Enachescu, Marius,
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Polyazulene-Based Materials for Heavy Metal Ion Detection. 2. (E)-5-(azulen-1-yl diazenyl)-1H-Tetrazole-Modified Electrodes for Heavy Metal Sensing

Enache Laura-Bianca, Anastasoae Veronica, Birzan Liviu, Ungureanu Eleonora-Mihaela, Diao Peng, Enachescu, Marius,
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Reduced Graphene Oxide Decorated with Dispersed Gold Nanoparticles: Preparation, Characterization and Electrochemical Evaluation for Oxygen Reduction Reaction

Lazar Oana-Andreea, Marinoiu Adriana, Raceanu Mircea, Pantazi Aida, Mihai Geanina, Varlam Mihai, Enachescu, Marius,
ENERGIES, 13(17), 4307 (2020).

Needle-free electrospinning of nanofibrillated cellulose and graphene nanoplatelets based sustainable poly (butylene succinate) nanofibers

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Band tail state related photoluminescence and photo-response of ZnMgO solid solution nanostructured films

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Electrochemical Non-Enzymatic Detection of Glucose Based on 3D Electroformed Copper on Ni Foam Nanostructures

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Understanding surface and interface properties of modified Ti50Zr with nanotubes

Aida Pantazi, Maria Vardaki, Geanina Mihai, Daniela Ionita, Andrei Bogdan Stoian, Marius Enachescu, Ioana Demetrescu,
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Eighteen Months Follow-Up with Patient-Centered Outcomes Assessment of Complete Dentures Manufactured Using a Hybrid Nanocomposite and Additive CAD/CAM Protocol

Corina Marilena Cristache, Eugenia Eftimie Totu, Gabriela Iorgulescu, Aida Pantazi, Dorel Dorobantu, Aurelia Cristina Nechifor, Ibrahim Isildak, Mihai Burlibasa, Gheorghe Nechifor, Marius Enachescu,

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Towards Uniform Electrochemical Porosification of Bulk HVPE-Grown GaN

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The Electrochemical Society - Journal of The Electrochemical Society, 166 (5), H3159-H3166, (2019).

Eco-friendly preparation of electrically conductive chitosan - reduced graphene oxide flexible bionanocomposites for food packaging and biological applications

Ana Barra, Nuno M. Ferreira, Manuel A. Martins, Oana Lazar, Aida Pantazi, Alin Alexandru Jderu, Sabine M. Neumayer, Brian J. Rodriguez, Marius Enachescu, Ferreira Paula, Claudia Nunes,

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Electrodeposition of Sn and Sn Composites with Carbon Materials Using Choline Chloride-Based Ionic Liquids

Ana T. S. C.Brandao, Liana Anicai, Lazar Oana Andreea, Sabrina Rosoiu, Aida Pantazi, Renata Costa, Marius Enachescu, Carlos M. Pereira, A. Fernando Silva,

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Electrodeposition of lead selenide films from ionic liquids based on choline chloride

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Eco-Friendly Push - Coated Polymer Solar Cells with no Active Material Wastes Yield Power Conversion Efficiencies over 5.5%

Shusei Inaba, Ryosuke Arai, Geanina Valentina Mihai, Oana Lazar, Calin Moise, Marius Enachescu, Yuko Takeoka, Varun Vohra,
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The Electrochemical Society - Journal of The Electrochemical Society, 166(5), H3159-H3166, (2019).

Eco-friendly preparation of electrically conductive chitosan - reduced graphene oxide flexible bionanocomposites for food packaging and biological applications

Ana Barra, Nuno M. Ferreira, Manuel A. Martins, Oana Lazar, Aida Pantazi, Alin Alexandru Jderu, Sabine M. Neumayer, Brian J. Rodriguez, Marius Enachescu, Ferreira Paula, Claudia Nunes,
Composites Science and Technology, 173, 53-60, (2019).

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Electrodeposition of Sn and Sn Composites with Carbon Materials Using Choline Chloride-Based Ionic Liquids

Ana T. S. C.Brandao, Liana Anicai, Lazar Oana Andreea, Sabrina Rosoiu, Aida Pantazi, Renata Costa, Marius Enachescu, Carlos M. Pereira, A. Fernando Silva,
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Ni-Mo alloy nanostructures as cathodic materials for hydrogen evolution reaction during seawater electrolysis

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Synthesis, characterization and antitumor activity of two new dipyrindinium ylide based lanthanide(III) complexes

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Angewandte Chemie-International Edition, 57(4), 1034-1038 (2018).

Pd surface functionalization of 3D electroformed Ni and Ni-Mo alloy metallic nanofoams for hydrogen production

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New sensor based on membranes with magnetic nano-inclusions for early diagnosis in periodontal disease

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Alex Laikhtman, Gennady Makrinich, Meltem Sezen, Melike Mercan Yildizhan, Jose I. Martinez, Doru Dinescu, Mariana Prodana, Marius Enachescu, Julio A. Alonso, Alla Zak
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University of Ulm, Chemistry Department, Germany – 1994

**REVIEW
ARTICLES**

Making, Breaking, and Sliding of Nanometer-Scale Contacts – review article

R.W. Carpick, M. Enachescu, D.F. Ogletree, M. Salmeron

Fracture and Ductile vs. Brittle Behavior: Theory, Modeling and Experiment, eds. G.E. Beltz, R.L. Blumberg Selinger, M.P. Marder and K.-S. Kim, vol. **539**, pp. **93-103**. Materials Research Society, Pittsburgh, **(1999)**.

**ALTE
PREZENTARI**

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**BREVETE
INTERNATIONALE**

Compus coordinativ dinuclear al europiului(III) cu liganzi micști, care manifestă proprietăți luminescente

ZUBAREVA Vera, MD; BULHAC Ion, MD; BORDIAN Olga, MD; VERLAN Victor, MD; CULEAC Ion, MD; ENACHESCU Marian, RO; MOISE Calin Constantin –

MD - BOPI 2/2020 (granted 2020)

Liposome for blocking site-specifically chemokine-related inflammatory processes in vascular diseases and metastasis

Manuel Calin, Simionescu Maya, Enachescu Marian, Mihaly Maria
EP 2 832 373 B1 (granted 2017)

Data Structures and Algorithms for Precise Defect Location by Analyzing Artifacts

M. Enachescu and S. Belikov

USA patent 7,551,769 B2 (granted June 2009)

Autofocus System and Method Using Focal Measure Gradient

S. Belikov and M. Enachescu

USA patent 7,538,815 B1 (granted February 2009)

Infrared Thermography For Defect Detection And Analysis

M. Enachescu and S. Belikov

China patent 03802593 (granted February 2009)

Imaging Systems for Automatically Focusing and Image Acquisition for Defect Detection, Localization, and Analysis

M. Enachescu and S. Belikov

Taiwan patent 93137954 (granted October 2008)

Methods for Analyzing Defect Artifacts to Precisely Locate Corresponding Defects

M. Enachescu and S. Belikov

USA patent 7,149,343 B2 (granted December 2006)

Methods and Systems Employing Infrared Thermography for Defect Detection and Analysis

M. Enachescu and S. Belikov

USA patent 6,840,666 B2 (granted January 2005)

Method and System for Detecting Electronic Shorts with IR

M. Enachescu, S. Belikov, and S. Meier

Taiwan patent 90129699 (granted April 2004)

**BREVETE
INTERNATIONALE
(CONTINUARE)**

Method and System for Infrared Detection of Electrical Short Defects
M. Enachescu, S. Belikov, and S. Meier
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Method and System for Infrared Detection of Electrical Short Defects
M. Enachescu, S. Belikov, and S. Meier
USA patent 6,714,017 (granted March 2004)

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