

**LISTA LUCRĂRILOR ȘTIINȚIFICE****Lista celor 10 lucrări relevante pentru realizările profesionale proprii (ISI/ISI Proceeding conform Web of Science)**

- [1] Corina BIRLEANU, Marius PUSTAN, Mircea CIOAZA, **Andreia MOLEA**, Florin POPA, Glad CONTIU, *Effect of TiO<sub>2</sub> nanoparticles on the tribological properties of lubricating oil: an experimental investigation*, Scientific Reports 12(1) (2022) Article no. 5201, <https://www.nature.com/articles/s41598-022-09245-2>.
- [2] Violeta POPESCU, **Andreia MOLEA**, Marioara MOLDOVAN, Pompilia Mioara LOPES, Amalia MOLDOVAN, George Liviu POPESCU, *The Influence of Enzymatic Hydrolysis of Whey Proteins on the Properties of Gelatin-Whey Composite Hydrogels*, Materials 14(13) (2021) Article no. 3507, <https://www.mdpi.com/1996-1944/14/13/3507>.
- [3] Dan MOLDOVANU, **Andreia MOLEA**, Istvan BARABAS, *Preliminary results on nano-diamond and nano-graphite testing as additive for an engine lubrication oil*, INTERNATIONAL CONFERENCE ON TRIBOLOGY (ROTRIB'19), IOP Conference Series-Materials Science and Engineering (2020) Article no. 012047, <https://iopscience.iop.org/article/10.1088/1757-899X/724/1/012047/pdf>.
- [4] Adrian TODORUT, **Andreia MOLEA**, Istvan BARABAS, *Predicting the Temperature and Composition - Dependent Density and Viscosity of Diesel Fuel - Ethanol Blends*, Periodica Polytechnica-Chemical Engineering 64(2) (2020) 213-220, <https://pp.bme.hu/ch/article/view/14757/8560>.
- [5] István BARABÁS, **Andreia MOLEA**, Ramona SUCIU, *Fuel Properties of Diesel-Ethanol-Tetrahydrofuran Blends: Experimental and Theoretical Approaches*. In: N. Burnete and B. O. Varga (Eds): AMMA 2018, Proceedings of the 4<sup>th</sup> International Congress of Automotive and Transport Engineering, (2019) 197-208, [https://doi.org/10.1007/978-3-319-94409-8\\_24](https://doi.org/10.1007/978-3-319-94409-8_24).



- [6] **Andreia MOLEA**, István BARABÁS, Ramona SUCIU, *Influence of TiO<sub>2</sub> Nano-particles Content on Physicochemical and Tribological Properties of Lubricant Oil*. In: N. Burnete and B. O. Varga (Eds): AMMA 2018, Proceedings of the 4<sup>th</sup> International Congress of Automotive and Transport Engineering (2019) 190-196, [https://doi.org/10.1007/978-3-319-94409-8\\_23](https://doi.org/10.1007/978-3-319-94409-8_23).
- [7] **Andreia MOLEA**, Paul VISUIAN, István BARABÁS, Ramona C. SUCIU, Nicolae V. BURNETE, *Key fuel properties and engine performances of diesel-ethanol blends, using tetrahydrofuran as surfactant additive*. CAR 2017 International Congress of Automotive and Transport Engineering - Mobility Engineering and Environment, IOP Conference Series: Materials Science and Engineering 252 (2017) 012077, <https://iopscience.iop.org/article/10.1088/1757-899X/252/1/012077>
- [8] **Andreia MOLEA**, Violeta POPESCU, Neil A. ROWSON, Ileana COJOCARU, Adrian DINESCU, Adriana DEHELEAN, Mihaela LAZAR. *Correlation of the physicochemical properties with the catalytic performance of Fe-doped titanium dioxide powders*. Industrial & Engineering Chemistry Research 54(30) (2015) 7346-7351; <http://dx.doi.org/10.1021/acs.iecr.5b00246>
- [9] **Andreia MOLEA**, Violeta POPESCU, Neil A. ROWSON, Adrian M. DINESCU, *Influence of pH on the formulation of TiO<sub>2</sub> nano-crystalline powders with high photocatalytic activity*. Powder Technology 253 (2014) 22–28, <http://dx.doi.org/10.1016/j.powtec.2013.10.040>
- [10] **Andreia MOLEA**, Violeta POPESCU, Neil A. ROWSON. *Effects of I-doping content on the structural, optical and photocatalytic activity of TiO<sub>2</sub> nanocrystalline powders*, Powder Technology 230 (2012) 203-211, <http://dx.doi.org/10.1016/j.powtec.2012.07.030>



### Teză de doctorat

[1] Materiale nanostructurate cu proprietăți fotocatalitice, Conducător științific Prof. dr. ing. Violeta Popescu, doctor prin Ordinul Ministerului Educației, Cercetării, Tineretului și Sportului nr. 6508, din 19 decembrie 2012.

### Cărți și capitole în cărți

[1] **Andreia Molea**, Teodora Alexandrina Deac, Levente Botond Kocsis, Producerea, testarea și utilizarea biocombustibililor, Editura Risoprint, Cluj-Napoca (2023) ISBN 978-973-53-3153-5.

[2] **Andreia Molea**, Violeta Valentina Merie, Ramona-Crina Suciu, Materiale utilizate în construcția și întreținerea autovehiculelor. Materiale solide, Editura UTPress, Cluj-Napoca, (2023) ISBN 978-606-737-681-4, <https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/681-4.pdf>

[3] István Barabas, Nicolae Burnete, Florin Mariasiu, Adrian Tododrut, Bogdan Ovidiu Varga, Liviu Călin Bolundut, Nicolae Vlad Burnete, Călin Doru Iclodean, Dan Moledovanu, Bogdan Manolin Jurchis, Levente Botond Kocsis, **Andreia Molea**, Iacob-Liviu Scurtu, Ioan Szabo, Thomas Imre Cyrille Buidin, Horațiu Carausan, Irina Duma, Andrei Călin Szirbe, *Tendințe tehnologice în domeniul autovehiculelor*, Editor Nicolae Vlad Burnete, Editura UTPRESS, Cluj-Napoca (2023) ISBN 978-606-737-641-8 <https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/641-8.pdf>

[4] Violeta Popescu, **Andreia Molea**, George Liviu Popescu, Corneliu Rusu-Trișcă, Ileana Cojocar, *Reducerea poluării - Aplicații. Metode fizico-chimice de separare a poluanților*, Editura SITECH, Craiova (2014).

**Articole/studii publicate în reviste din fluxul științific internațional (cotate ISI)**

- [1] **Andreia MOLEA**, Violeta POPESCU, George Liviu POPESCU, Ramona Crina SUCIU, Adrian DINESCU, Marioara MOLDOVAN, *Synthesis and characterisation of titanium dioxide nanoparticles sensitised with natural chlorophyll dye extracted from Mentha leaves*, Journal of Optoelectronics and Advanced Materials 19(3-4) (2017) 272-277.
- [2] George Liviu POPESCU, Nicolae FILIP, **Andreia MOLEA**, Violeta POPESCU, *The effect of using pyrolysis oils from polyethylene and diesel on the pollutant emissions from a single cylinder diesel engine*. Studia Universitatis Babes-Bolyai Chemia 60(4) (2015) 273-288, <http://studia.ubbcluj.ro/download/pdf/955.pdf>
- [3] Violeta POPESCU, **Andreia MOLEA**, Adrian DINESCU, Cornel RUSU-TRIȘCĂ, Mărioara MOLDOVAN, Goerge Liviu POPESCU. *Optical properties of PbS crystals obtained on glass substrate from solutions containing hydroxylamine hydrochloride in an ultrasonic baths*, Chalcogenide Letters 12(7) (2015) 363-373, [http://www.chalcogen.ro/363\\_Popescu.pdf](http://www.chalcogen.ro/363_Popescu.pdf)
- [4] **Andreia MOLEA**, Violeta POPESCU, Neil A. Rowson, *A comparative study of the photo-catalytic performance of amorphous and nano-crystalline TiO<sub>2</sub>*. Optoelectronics and Advanced Materials - Rapid Communications 9(3-4) (2015) 431-435, <http://oam-rc.inoe.ro/index.php?option=magazine&op=view&idu=2550&catid=89>
- [5] Doina PRODAN, **Andreia MOLEA**, Mărioara MOLDOVAN, Violeta POPESCU, Laura SILAGHI-DUMITRESCU, Cristina PREJMEREAN, Stanca BOBOIA, Codruța SAROSI. *Synthesis and characterization of the hydroxyapatite and TiO<sub>2</sub> doped hydroxyapatite powders*, Journal of Optoelectronics and Advanced Materials 16(11-12) (2014) 1300-1305, <http://joam.inoe.ro/index.php?option=magazine&op=view&idu=3589&catid=87>
- [6] **Andreia MOLEA**, Violeta POPESCU, *The obtaining of titanium dioxide nanocrystalline powders*. Optoelectronics and Advanced Materials–Rapid Communications 5(3-4) (2011) 242–246, <http://oam-rc.inoe.ro/index.php?option=magazine&op=view&idu=1489&catid=60>



**Articole/studii publicate în lucrări ale principalelor conferințe  
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[1] Violeta MERIE, **Andreia MOLEA**, Nicolae V. BURNETE, Bogdan NEAMȚU, Gavril NEGREA, *Structural and optical characterization of titanium nitride thin films deposited by magnetron sputtering*. Powder metallurgy and advanced materials RoPM&AM 2017, Materials Research Proceedings 8 (2018) 134-142, <http://dx.doi.org/10.21741/9781945291999-15>.

[2] István BARABÁS, Adrian TODORUȚ, Nicolae CORDOȘ, **Andreia MOLEA**, *Current challenges in autonomous driving*. CAR2017 International Congress of Automotive and Transport Engineering - Mobility Engineering and Environment, IOP Conference Series: Materials Science and Engineering 252 (2017) 012096, doi:10.1088/1757-899X/252/1/012096.

[3] Florina RUSU, Violeta MERIE, Ioana PINTEA, **Andreia MOLEA**, *Adhesion analysis for chromium nitride thin films deposited by reactive magnetron sputtering*. 7<sup>th</sup> International Conference on Advanced Concepts in Mechanical Engineering ACME 2016, IOP Conference Series: Materials Science and Engineering 147 (2016) 012023, doi:10.1088/1757-899X/147/1/012023.

[4] Doina PRODAN, Marioara MOLDOVAN, Cristina PREJMEREAN, Laura SILAGHI-DUMITRESCU, Stanca BOBOIA, Violeta POPESCU, Violeta PAȘCALAU, **Andreia MOLEA**, Diana LAZAR, Ioana PERHAIȚA. *Synthesis and characterization of an experimental Zn-hydroxyapatite powders with application in dentistry*, Bioceramics 25, Book Series: Key Engineering Materials 587 (2014) 43-51, [www.scientific.net/KEM.587.43](http://www.scientific.net/KEM.587.43)

Data

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