

**LIST OF SCIENTIFIC PAPERS****List of 10 papers relevant to professional achievements (ISI/ISI Proceeding according to Web of Science)**

- [1] Corina BIRLEANU, Marius PUSTAN, Mircea CIOAZA, **Andreia MOLEA**, Florin POPA, Glad CONTIU, *Effect of TiO₂ 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 4th International Congress of Automotive and Transport Engineerig, (2019) 197-208, https://doi.org/10.1007/978-3-319-94409-8_24.



- [6] **Andreia MOLEA**, István BARABÁS, Ramona SUCIU, *Influence of TiO₂ Nano-particles Content on Physicochemical and Tribological Properties of Lubricant Oil*. In: N. Burnete and B. O. Varga (Eds): AMMA 2018, Proceedings of the 4th International Congress of Automotive and Transport Engineering (2019) 190-196, 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 TiO₂ 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 TiO₂ nanocrystalline powders*, Powder Technology 230 (2012) 203-211, <http://dx.doi.org/10.1016/j.powtec.2012.07.030>



PhD Thesis

[1] Nanostructured materials with photocatalytic activity, Supervisor Prof. dr. ing. Violeta Popescu, doctor by the Order of the Ministry of Education, Research, Youth and Sport no. 6508, from 19 Decembre 2012.

Published books and books chapters

[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, *Tendențe 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).



Articles/studies published in internationally recognized specialized journals (ISI quotes)

- [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 Babeș-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
- [4] **Andreia MOLEA**, Violeta POPESCU, Neil A. Rowson, *A comparative study of the photo-catalytic performance of amorphous and nano-crystalline TiO₂*. 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 TiO₂ 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>



Articles/studies published in the works of the main international/national conferences

- [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*. 7th 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

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