

CURRICULUM VITAE

Date personale

Nume și prenume	TIGHINEANU ION
Data nașterii	22 martie 1955
Locul nașterii	s. Sofia, r. Drochia, Republica Moldova
Situația familială	căsătorit, 2 copii
Poziția actuală	Președinte interimar al Academiei de Științe a Moldovei, Coordonator științific al Centrului Național de Studii și Testare a Materialelor, Universitatea Tehnică a Moldovei

1. Studii, doctorat, postdoctorat

- 1993 – titlul științifico-didactic de profesor universitar, Universitatea Tehnică a Moldovei;
- 1991 – doctor habilitat în științe fizico-matematice, Institutul de Fizică Aplicată al Academiei de Științe a Moldovei, Chișinău, Republica Moldova;
- 1982 – doctor (PhD) în științe fizico-matematice, Institutul de Fizică “Lebedev” al Academiei de Științe a URSS, Moscova;
- 1978-1981 – doctorand la Institutul de Fizică „Lebedev” al Academiei de Științe a URSS;
- 1978 – M.S. cu mențiune, Institutul de Inginerie și Fizică din Moscova;
- 1975 – 1978 student, Institutul de Inginerie și Fizică din Moscova;
- 1972 – 1975 student, Institutul Politehnic din Chișinău;
- 1972 – a absolvit școala medie din s. Sofia, r. Drochia cu medalie de aur.

2. Activitatea profesională

- Din 12/2012 – prim-vicepreședinte, președinte interimar al Academiei de Științe a Moldovei;
- 11/2004-12/2012 – vicepreședinte al Academiei de Științe a Moldovei;
- din 2001 – director fondator al Centrului Național de Studiu și Testare a Materialelor;
- 05/1998-11/2004 – prorector la Universitatea Tehnică a Moldovei;
- 12/2000 – 05/2001 – profesor invitat, departamentul EECS, Universitatea din Michigan, SUA;

- 10/1995 – 12/1996, 11/1998 – 07/1999 – bursier Humboldt, Universitatea Tehnică din Darmstadt, Germania;
- 1992, 1993, 1994 – vizite de 3 luni la Universitățile din Parma și Cagliari (Italia) în calitate de profesor invitat;
- 1981 – 1998 cercetător științific inferior, superior, coordonator, principal, șef al Laboratorului „Structuri Semiconductoare de Dimensiuni Reduse”.

3. Reprezentant al Guvernului Republicii Moldova, președinte al grupurilor de negociere

- 2005-2017 Reprezentant plenipotențiar al Guvernului Republicii Moldova la Institutul Unificat de Cercetări Nucleare din Dubna, Federația Rusă;
- 2011 - Președinte al grupului de negociere cu Comisia Europeană a condițiilor de asociere la Programul comunitar Cadru 7;
- 2009 - 2017 Președinte al grupului de negociere cu Guvernul Republicii Moldova a Acordului de parteneriat și a modificărilor la Acordul de parteneriat dintre Academia de Științe și Guvernul Republicii Moldova.

4. Membru al asociațiilor, comitetelor și comisiilor profesionale internaționale

- din 2018 - Membru al Comisiei de Știință și Tehnologia Materialelor, Academia Română;
- din 2012 - Membru al Societății Internaționale pentru Promovarea Tehnologiei (IEEE);
- din 2012 - Membru al Societății Internaționale „Electron Device Society” (EDS);
- din 2009 - Membru al Societății Internaționale „Optical Society of America” (OSA);
- din 2009 - Membru al Societății Internaționale pentru Optică și Fonică (SPIE);
- din 2004 - Membru al Asociației Americane pentru Promovarea Științei (American Association for the Advancement of Science - AAAS);
- 2004 - 2017 Membru al Comitetului internațional „Committee on Engineering Capacity Building” (World Federation of Engineering Associations);
- din 2000 - Membru al Societății Internaționale „The Electrochemical Society”;
- din 1996 - Membru al Societății Internaționale “Materials Research Society”, S.U.A.

5. Domeniile de activitate științifică

Nanotehnologii și nanomateriale, știința materialelor, materiale nanostructurate pentru aplicații în biomedicină, microfluidică, fonică și optică neliniară; Litografia cu sarcină de suprafață, prelucrare electrochimică a materialelor electronice pentru aplicații senzitive, depunere electrochimică în nanotemplate; Compuși semiconductori binari și ternari, tranziții de fază sub

presiune hidrostatică; Proprietățile optice și fotoelectrice ale structurilor de dimensionalitate redusă în baza compușilor semiconductori, microscopia electronică și microscopia de forțe atomice.

6. Merite, titluri onorifice, distincții, premii, burse

- 2018 – **SPIE Fellow** (membru cu merite deosebite al Societății Internaționale pentru Optică și Fonică, <http://spie.org/profile/Ion.Tiginyanu-18576>);
- 2018 – **membru-senior al OSA** (Societatea Americană pentru Optică, https://www.osa-opn.org/home/career/2018/july/ion_tiginyanu_on_building_a_network/);
- 2017 – **Profesor de Onoare al Universității din Shizuoka, Japonia**;
- 2016 – „**Inventatorul Anului**”, Premiul Companiei TeleRadio-Moldova;
- 2015 – **Membru de Onoare al Academiei Române**;
- 2015 – **Doctor de Onoare al Institutului Unificat de Cercetări Nucleare din Dubna**;
- 2015 – Cavaler al „**Ordinului de Onoare**”, Republica Moldova;
- 2014 - **Premiul Academiilor de Științe din Belarus, Republica Moldova și Ucraina** pentru realizări științifice;
- 2014 – **Doctor Honoris Causa** al Universității de Stat „Alec Russo” din Bălți, Republica Moldova;
- 2013 – **Membru de Onoare** al Academiei Oamenilor de Știință din România (AOSR);
- 2012 – **membru titular** (academician) al Academiei de Științe din Moldova;
- 2011 - **Medalia de Aur „Inventator Remarcabil”** a Organizației Mondiale de Proprietate Intelectuală;
- 2010 - Cavaler al **Ordinului „Gloria Muncii”**, Republica Moldova;
- 2007 - Cavaler al **Ordinului “Merite de l’Invention”**, Regatul Belgiei;
- 2007 – **membru corespondent** al Academiei de Științe din Moldova;
- 2005 - Nominalizat „**Savant al anului 2005**” în domeniul științelor reale, Moldova;
- 2005 - Titlul onorific „**Om emerit**”, Republica Moldova;
- 2004 - **Premiul Național al Republicii Moldova în domeniul Științei și Tehnicii**;
- 1995 - **Bursa Alexander von Humboldt**, Bonn, Germania;
- 1992 - Premiul Prezidiului A.Ș.M. pentru activitatea științifică.

7. Cursuri universitare, lecții publice, conducător de doctorat

Cursuri: Nanotehnologii, Fizica corpului solid, Materiale pentru micro-optoelectronică și fonică;

Lecții publice:

- invitat în calitate de expert internațional (anul 2012) pentru a prezenta lecția publică «Нанотехнологии – зов времени» în fața studenților de la universități din Moscova (retransmisă de mai multe ori de canalele «Культура» și «РТР Планета» ale Federației Ruse, https://tvkultura.ru/video/show/brand_id/20898/episode_id/155723/video_id/155723/);
- Prezentarea lecției publice “Nanotehnologiile schimbă lumea” la 23 martie 2015 în Sala Azuirie a Academiei de Științe din Moldova (în cadrul lecturilor academice), retransmisă de canalul TV Moldova 1 în cadrul emisiunii “Știință și Inovare” (<https://youtu.be/9IQeGpJIM>).

Conducător de doctorat/postdoctorat: a pregătit **17 doctori** în științe și **2 doctori habilitați**, actualmente 2 doctoranzi pregătesc tezele pentru susținere.

8. Publicații, brevete de invenție, citări

Circa 700 publicații științifice, inclusiv **400 articole sunt în bazele de date SCOPUS;**

6 cărți editate în limba engleză (dintre care trei editate la „Springer” în Germania și una la „Woodhead Publishing” in UK) ;

52 brevete de invenție;

Citări: peste **5780 citări** (conform bazelor de date SCOPUS) ;

Indicele Hirsch: **h = 39**

9. Referate științifice

Circa **120 de referate științifice** prezentate la universități și centre de cercetare din SUA, Canada, Germania, Italia, Franța, Japonia, Republica Coreea, Anglia, România, Spania, Suedia, Olanda, Belgia, Grecia, Portugalia, Danemarca, Polonia, Ungaria, China, Rusia, Ucraina etc.

10. Participări la saloane internaționale de invenție

- Une medaille D'argent pour l'invention “Nanotechnologie pour la stimulation artificielle de la motilité de l'appareil gastro-intestinal”. Salon International des Inventions, Geneve 2016.
- Medalia de aur pentru invenția “Metodă de stimulare a tractului gastrointestinal”. AGEPI exhibition "Info Invent" 2015.
- Gold Medal for the invention “Technology for the fabrication of membranes based on titania nanotubes with controlled inner diameter “. The Belgian and International Trade Fair for Technological Innovation, Eureka-2011, Brussels.
- Gold Medal for the invention “Technology for the fabrication of titania nanotubes on titanium substrate” presentation. AGEPI exhibition "Info Invent" 2011.
- Silver Medal for the invention “Filiform nanostructures with highly integrated nanowires and methods of their fabrication”. The Belgian and International Trade Fair for Technological Innovation, Eureka-2010, Brussels.
- Une medaille D'argent pour l'invention “Nanotubes dans une matrice semiconductrice”. Salon International des Inventions, Geneve 2008.

- Диплом АРХИМЕД-2008 и специальный приз за "Лучшее изобретение в сфере нанотехнологий", XI Международный Салон Промышленной Собственности, Москва 2008.
- Gold Medal for the invention "Ordered arrays of metal nanowires and nanotubes in semiconductor matrices". The Belgian and International Trade Fair for Technological Innovation, Eureka-2007, Brussels.
- Une Medaille D'OR pour l'invention "Ordered Metallo-Dielectric Networks", Salon International des Inventions, Geneve-2007.
- Gold medal for the invention "Nanocomposite materials and ordered nanotemplates", AGEPI exhibition "Info Invent" 2007.
- Gold Medal for the invention "Technology for Fabrication of Integrated Lenses based on Metamaterials". 55th World Exhibition of Innovation, Research and New Technology, Eureka-2006, Brussels.
- "Une medaille d'argent pour l'invention "Selecteur pour detecter le manque methane", Salon International des Inventions, Geneve 2006.
- Medalia de Aur („Award of Excellence”) pentru invenția „Technology for Manufacturing Semiconductor Nanostructures” la Expoziția Internațională de Invenție și Produse Noi din Pittsburgh (INPEX) 2005, SUA.
- Gold Medal for the invention "Technological approaches for the fabrication of porous semiconductor structures". 54th World Exhibition of Innovation, Research and New Technology, Eureka-2005, Brussels.
- Une medaille D'argent pour l'invention "Technologie pour la fabrication de nanostructures semiconductrices". Salon International des Inventions, Geneve 2005.
- Gold medal for the invention "Selective methane leakage detector". AGEPI Exhibition "InfoInvent" 2005.
- Silver medal for the invention "Development of technology for fabrication of semiconductor nanostructures for nanofabrication". AGEPI exhibition "Info Invent" 2005.
- Gold medal for the invention "Technology for fabrication of semiconductor nanostructures". AGEPI exhibition "Info Invent" 2004.
- Silver medal for the invention "Methods for fabrication of porous semiconductor structure". AGEPI exhibition "Info Invent" 2004.

11. Precieri ale elaborărilor tehnologice și rezultatelor științifice de portaluri internaționale sau prin plasarea lor pe coperta revistelor internaționale

- 11 elaborări selectate și menționate de portalul Nanotechweb.org din Londra și 1 elaborare menționată de portalul Physics World (<https://physicsworld.com/a/hydrophobic-or-hydrophilic-aero-gallium-nitride-is-both/>);
- 7 elaborări tehnologice și rezultate științifice au fost menționate pe coperta revistelor internaționale cu factor de impact (Exemple: <https://onlinelibrary.wiley.com/doi/abs/10.1002/sml.201670203>; <https://onlinelibrary.wiley.com/doi/abs/10.1002/pssr.201290008>; <https://onlinelibrary.wiley.com/doi/10.1002/pssr.201090005>).

12. Organizator al Conferințelor Internaționale, membru al comitetelor internaționale

- Chairman of the SPIE Nanotechnology Conference (editions VII and VIII), Barcelona, Spain, May 4-6, 2015 și May 8-9, 2017;
- Co-chairman of the Symposium S "Materials for Nanoelectronics & Nanophotonics" of the European Materials Research Society Fall Meeting, Warsaw, Poland, September 18-21, 2017;
- Co-chairman of the SPIE Nanotechnology Conference, Grenoble, France, April 24-26, 2013;

- Co-chairman of the 3rd International Conference on Nanotechnology and Biomedical Engineering, Sept. 23-26, 2015, Chisinau, Republic of Moldova;
- Co-chairman of the 2nd International Conference on Nanotechnology and Biomedical Engineering, April 18-20, 2013, Chisinau, Republic of Moldova;
- Co-chairman of the 1st International Conference on Nanotechnology and Biomedical Engineering, July 7-8, 2011, Chisinau, Republic of Moldova;
- Co-chairman of a series of International Conferences on Microelectronics and Computer Science, Chisinau, Moldova;
- Co-chairman of a series of German-Moldovan Workshops on Nanotechnologies (since 2011 - Workshops on Novel Nanomaterials for Electronic, Photonic and Biomedical Applications);
- 1999-2016 Membru al Comitetului internațional de coordonare al Conferinței Internaționale “International Conference on Ternary and Multinary Compounds”.

13. Participări la realizarea proiectelor regionale și internaționale

1. Project NanoMedTwinn no 810652 „Promoting smart specialization at the Technical University of Moldova by developing the field of novel nanomaterials for biomedical applications through excellence in reserarch and twinning” (2018-2021);
2. Project SCOPES-Swiss no IZ73Z0_152273/1 “Development and characterization of ultra-thin membranes of GaN and related nitride materials for sensor and piezo/acoustophotonic applications” (2014-2017);
3. Project STCU no 5933 “Development of maskless lithography for three-dimensional nanostructuring of GaN” (2014-2015);
4. Project BMBF-Germany „NanoEngine on titania nanotubes for biological applications” (2013-2015);
5. Project FP7 - Mold-Era no 266515 “Preparation for Moldova’s integration into the European Research Area and into the Community R&D Framework Programmes on the basis of scientific excellence” (2010-2013);
6. Project SCOPES-Swiss no Z73Z0 128047 “Nanopatterned materials for the improvement of terahertz quantum cascade lasers and laser-driven solid-state terahertz emitters”, (2010-2012);
7. Project STCU no 4034 “Development of random lasers based on porous semiconductor compounds for photonic applications”;
8. Project INTAS no 05-104-7567 “Development of THz sources on nanostructured semiconductors and focusing elements on photonic crystals” (2006 – 2008);

9. Project CGP-CDRF no ME2-2527 “Development of optical frequency up-converters and dielectric mirrors based on nanostructured III-V compounds for integrated optoelectronic circuits” (2004 – 2006);
10. Project INTAS no 01- 0796 “Monolayered opalline superlattice: application to nano-technology of 2D ordered array of epitaxial nanodots and metalattice conductors” (2004 – 2005);
11. Project INTAS no 01- 0075 “Ferroelectrics templated in nanoporous membranes” (2004 – 2005);
12. Project BMBF-Germany “Submicrometer GaN Schottky diodes for THz Applications” (2002-2004);
13. Project BGP-CRDF no ME2-3013 “Phonon Engineering in III-V Nitrides for Device Applications” (2002 – 2004);
14. Project DFG-Germany “Nonlinear optical properties of nanostructured III-V compounds” (2000-2002);
15. Project COBASE (NRC-USA) “Three-Dimensional Microstructuring and Nanoheteroepitaxy of Gallium Nitride” (2000-2001);
16. High Technology NATO Grant no. HTECH.LG 961399 “Porosity-induced confinement phenomena in III-V compounds” (1997-2000).

14. Cărți editate, volume de lucrări ale conferințelor internaționale, editor invitat la reviste științifice internaționale, membru al Board-ului la reviste științifice

Cărți

1. *Nanostructures and Thin Films for Multifunctional Applications*. Ion Tiginyanu, Pavel Topala and Veaceslav Ursaki (Eds.). Springer, Germany (2016). 576 pages.
2. *Pressure-Induced Phase Transitions in AB₂X₄ Chalcogenide Compounds*. F. J. Manjon, I. Tiginyanu, and V. Ursaki (Eds.). Springer, Germany (2014). 345 pages.
3. *Nanocoatings and Ultra Thin-Films*. A. S. Hamdy and I. Tiginyanu (Eds.). Woodhead Publishing Limited, Abington Cambridge, UK (2011). 448 pages.
4. *Nanoscale Phenomena: Fundamentals and Applications*. Horst Hahn, Anatoli Sidorenko, and Ion Tiginyanu (Eds.). Springer, Berlin/Heidelberg (2009). 230 pages.
5. *II-III₂VI₄ compounds under high pressure*. V. Ursaki, I.M Tiginyanu, and F.J. Manjon. Chișinău, AȘM, Moldova (2010). 168 pages. ISBN 978-9975969079.
6. *Porous III-V Semiconductors*. I. Tiginyanu, S. Langa, H. Föll and V. Ursaki. Stiinta, Chisinau (2005). 240 pages (see also online <http://www.porous-35.com/>).

Editor la volume de lucrări ale conferințelor internaționale

1. “Nanotechnology VIII”, Ion M. Tiginyanu, Rainer Adelung, Andrei Sarua (Editors).
Proceedings of SPIE, Vol. 10248 (SPIE, Bellingham, WA 2017), ISBN: 9781510609976.
2. Nanotechnology VII”, Ion M. Tiginyanu (Editor). *Proceedings of SPIE*, Vol. 9519, SPIE, 2015. ISBN: 9781628416428.
3. *IFMBE Proceedings*, Vol. 55 (2015). 3rd International Conference on Nanotechnologies and Biomedical Engineering, ICNBME-2015, September 23-26, 2015, Chisinau, Republic of Moldova (Editors: V. Sontea, I. Tiginyanu), ISBN: 978-981-287-736-9.

Editor invitat la reviste științifice internaționale

1. Andrei Rotaru, Finlay D. Morrison, Ion Tiginyanu (Guest Editors), *Ceramics International*, Special issue on „Thermophysical Aspects of Functional Ceramics and Surfaces”, Vol. 45, no 2, part B (February 2019).
2. Yogendra Mishra, Jost Adam, Oliver G. Schmidt, Ion Tiginyanu (Guest Editors), *Vacuum*, Special Section on “Materials – Nanoelectronics & Nanophotonics”, Vol. 155 (2018).
3. Helmut Föll, Mark-Daniel Gerngross, Michael J Sailor and Ion Tiginyanu (Guest Editors), *Semiconductor Science and Technology*, Special issue on „Electrochemical Processing of Semiconductor Materials”, Vol. 31, no. 1 (2016).
4. Hadis Morkoc, Ion Tiginyanu (Guest Editors), *Turkish Journal of Physics*, Special Issue on „Nano- and Self-Assembled Structures”, Vol. 38, no 3 (2014).
5. Ion Tiginyanu, Rainer Adelung (Guest Editors), *Journal of Nanoelectronics and Optoelectronics*, A Special Section on „Nanotechnologies and Nanomaterials for Electronic and Photonic Applications”, Vol. 9, no 2, preface on pp. 193-195 (2014).
6. Ion Tiginyanu (Guest Editor), *Journal of Nanoelectronics and Optoelectronics*, A Special Section on „Nanotechnologies and Nanomaterials for Electronic, Phononic and Photonic Applications”, Vol. 7, no 7, preface on pp. 637-639 (2012).

Membru al Board-ului editorial la reviste științifice internaționale

1. Semiconductor Science and Technology, IOP Publishing, United Kingdom
(<https://iopscience.iop.org/journal/0268-1242/page/Editorial%20Board>).
2. European Journal of Engineering Education, Taylor & Francis, United Kingdom
(<https://www.tandfonline.com/action/journalInformation?show=editorialBoard&journalCode=ceee20>).
3. Romanian Reports in Physics, Publishing House of the Romanian Academy
(<http://www.rrp.infim.ro/editorial.html>).

4. Surface Engineering and Applied Electrochemistry, IAP (Springer)

(<https://www.springer.com/engineering/production+engineering/journal/11987>).

15. Cunoașterea limbilor

Română – nativă

Engleză - fluent

Rusă - fluent

Date de contact

Bd. Ștefan cel Mare, 1

MD-2001 Chișinău

Republica Moldova

E-mail: tiginyanu@asm.md

Tel: 373 22 274047

Fax: 373 22 542823

Lista publicațiilor în reviste științifice (2009-2019)

1. Self-organized and self-propelled aero-GaN with dual hydrophilic-hydrophobic behavior. Ion Tiginyanu, Tudor Braniste, Daria Smazna, Mao Deng, Fabian Schütt, Arnim Schuchardt, Marion A. Stevens-Kalceff, Simion Raevschi, Lorenz Kienle, Nicola Puglo, Yogendra K. Mishra, Rainer Adelung.
Nano Energy, Vol. 56, pp. 759-769 (2019).
2. Sensing up to 40 atm using pressure-sensitive aero-GaN. Mircea Dragoman, Vladimir Ciobanu, Sindu Shree, Daniela Dragoman, Tudor Braniste, Simion Raevschi, Adrian Dinescu, Andrei Sarua, Yogendra K. Mishra, Nicola Pugno, Rainer Adelung, Ion Tiginyanu.
Physica Status Solidi – Rapid Research Letters (<https://doi.org/10.1002/pssr.201900012>, 2019).
3. Towards uniform electrochemical porosification of bulk HVPE-grown GaN. Ed. Monaico, C. Moise, G. Mihai, V. V. Ursaki, K. Leistner, I. M. Tiginyanu, M. Enachescu, K. Nielsch.
Journal of the Electrochemical Society, Vol. 166, no 5, pp. H3159-H3166 (2019).
4. Improving gas sensing by CdTe decoration of individual Aerographite microtubes. Julian Ströbel, Lidia Ghimpu, Vasile Postica, Oleg Lupan, Maximilian Zapf, Sven Schönherr, Robert Röder, Carsten Ronning, Fabian Schütt, Yogendra Kumar Mishra, Ion Tiginyanu, Rainer Adelung, Janik Marx, Bodo Fiedler, Lorenz Kienle.
Nanotechnology, Vol. 30, no 6, 065501 (2019).
5. Hierarchical Aerographite 3D flexible networks hybridized by InP micro/nanostructures for multifunctional applications. Irina Plesco, Julian Strobel, Fabian Schütt, Cameliu Himcinschi, Nabiha Ben Sedrine, Teresa Monteiro, Maria Rosário Correia, Leonid Gorceac, Boris Cinic, Veaceslav Ursaki, Janik Marx, Bodo Fiedler, Yogendra K. Mishra, Lorenz Kienle, Rainer Adelung, Ion Tiginyanu.
Scientific Reports, Vol. 8, 13880 (2018).
6. Learning mechanisms in memristor networks based on GaN nanomembranes. Mircea Dragoman, Ion Tiginyanu, Daniela Dragoman, Adrian Dinescu, Tudor Braniste, Vladimir Ciobanu.
Journal of Applied Physics, Vol. 124, 152110 (2018).
7. Possible coherent backscattering of lightwaves from a strongly absorbing nanoporous medium. Sergey V. Gaponenko, Eduard Monaico, Vladimir V. Sergentu, Sergey Ya. Prislopski, Ion M. Tiginyanu.
Journal of Optics, Vol. 20, 075606 (2018).
8. Flexible pressure sensor based on graphene aerogel microstructures functionalized with CdS nanocrystalline thin film. Irina Plesco, Mircea Dragoman, Julian Strobel, Lidia Ghimpu, Fabian Schütt, Adrian Dinescu, Veaceslav Ursaki, Lorenz Kienle, Rainer Adelung, Ion Tiginyanu.
Superlattices and Microstructures, Vol. 117, pp. 418-422 (2018).
9. Characterization of core/shell structures based on CdTe and GaAs nanocrystalline layers deposited on SnO₂ microwires. L. Ghimpu, V.V. Ursaki, A. Pantazi, R. Mesterca, O. Brancoveanu, Sindu Shree, R. Adelung, I.M. Tiginyanu, M. Enachescu.
Superlattices and Microstructures, Vol. 116, pp. 64-70 (2018).
10. ZnAl₂O₄-functionalized zinc oxide microstructures for highly selective hydrogen gas sensing applications. Mathias Hoppe, Oleg Lupan, Vasile Postica, Niklas Wolff, Viola Duppel, Lorenz Kienle, Ion Tiginyanu, Rainer Adelung.
Physica Status Solidi (a), Vol. 215, no 7, 1700772 (2018).
11. Zinc oxide nanotetrapods with different arm morphologies for versatile nanosensors.

- Ingo Paulowicz, Vasile Postica, Oleg Lupan, Niklas Wolff, Sindu Shree, Mao Deng, Ala Cojocar, Yogendra K. Mishra, Ion Tiginyanu, Lorenz Kienle, Rainer Adelung.
Sensors and Actuators B – Chemical, Vol. 262, pp. 425-435 (2018).
12. Ultrafast third-order optical nonlinearity in SnS₂ layered compound for photonic applications.
A. Petris, P. Gheorghe, V. I. Vlad, E. Rusu, V. V. Ursaki, I. M. Tiginyanu.
Optical Materials, Vol. 76, pp. 69-74 (2018)
13. Properties of a single SnO₂:Zn₂SnO₄-functionalized nanowire.
Oleg Lupan, Niklas Wolff, Vasile Postica, Tudor Braniste, Ingo Paulowicz, Viktor Hrkac, Yogendra Kumar Mishra, Ion Tiginyanu, Lorenz Kienle, Rainer Adelung.
Ceramics International, Vol. 44, pp. 4859-4867 (2018).
14. A SnS₂-based photomemristor driven by sun.
Mircea Dragoman, Mihail Batiri, Adrian Dinescu, Vladimir Ciobanu, Emil Rusu, Daniela Dragoman, Ion Tiginyanu.
Journal of Applied Physics, Vol. 123, 024506 (2018).
15. Perovskite solar cells with ZnS as electron transport layer.
Mihail Popa, Anvar Zakhidov, Ion Tiginyanu.
Proceedings of the Romanian Academy, Series A, Vol. 19, no 4, pp. 559-566 (2018).
16. Targeting Endothelial Cells with Multifunctional GaN/Fe Nanoparticles.
Tudor Braniste, Ion Tiginyanu, Tibor Horvath, Simion Raevschi, Birgit Andrée, Serghei Cebotari, Erin C. Boyle, Axel Haverich and Andres Hilfiker.
Nanoscale Research Letters, Vol. 12, 486 (2017).
17. Mott type electrical conductivity in ZnS_xSe_{1-x} thin films.
M. Popa, I. Tiginyanu, V. Ursaki.
Romanian Journal of Physics, Vol. 62, no 1-2, 602 (2017).
18. T. Braniste, Joachim Ciers, Ed. Monaico, D. Martin, J.-F. Carlin, V.V. Ursaki, V.V. Sergentu, I. M. Tiginyanu, N. Grandjean.
Multilayer porous structures of HVPE and MOCVD grown GaN for photonic applications.
Superlattices and Microstructures, Vol. 102, pp. 221-234 (2017).
19. Gold Electroplating as a Tool for Assessing the Conductivity of InP Nanostructures Fabricated by Anodic Etching of Crystalline Substrates.
E. V. Monaico, I. M. Tiginyanu, V. V. Ursaki, K. Nielsch, D. Balan, M. Prodana, and M. Enachescu.
Journal of the Electrochemical Society, Vol. 164, no 4, pp. D179-183 (2017).
20. Hybridization of zinc oxide tetrapods for selective gas sensing applications.
O. Lupan, V. Postica, J. Gröttrup, A. K. Mishra, N. H. de Leeuw, J. F. C. Carreira, J. Rodrigues, N. Ben Sedrine, M. R. Correia, T. Monteiro, V. Cretu, I. Tiginyanu, D. Smazna, Y. K. Mishra, R. Adelung.
ACS Applied Materials & Interfaces, Vol. 9, pp. 4084-4099 (2017).
21. Multilayer porous structures on GaN for the fabrication of Bragg reflectors.
Tudor Braniste, Eduard Monaico, Denis Martin, Jean-Francois Carlin, Veaceslav Popa, Veaceslav V. Ursaki, Nicolas Grandjean, Ion M. Tiginyanu.
Proceedings SPIE, Vol. 10248, 102480R (2017). DOI: 10.1117/12.2266280.
22. Size-dependent UV and gas sensing response of individual Fe₂O₃-ZnO:Fe micro- and nanowire based devices.
J. Gröttrup, V. Postica, N. Ababii, O. Lupan, C. Zamponi, D. Meyners, Y. K. Mishra, V. Sontea, I. Tiginyanu, and R. Adelung.
Journal of Alloys and Compounds, Vol. 701, pp. 920-925 (2017).
23. Atomically thin semiconducting layers and nanomembranes: A review.
Mircea Dragoman, Daniela Dragoman, and Ion Tiginyanu.
Semiconductor Science and Technology, Vol. 32, 033001 (2017).

24. Ultra-lightweight pressure sensor based on graphene aerogel decorated with piezoelectric nanocrystalline films.
Mircea Dragoman, Lidia Ghimpu, Cosmin Obreja, Adrian Dinescu, Irina Plesco, Daniela Dragoman, Tudor Braniste, Ion Tiginyanu.
Nanotechnology, Vol. 27, 475203 (2016).
25. Anomalous retroreflection from nanoporous materials as backscattering by „dark” and „bright” modes.
V. V. Sergentu, S. Ya. Prislowski, E. V. Monaico, V. V. Ursaki, S. V. Gaponenko, I. M. Tiginyanu.
Journal of Optics, Vol. 18, no 12, 125008 (2016).
26. Multifunctional Device based on ZnO:Fe Nanostructured Films with Enhanced UV and Ultra-Fast Ethanol Vapour Sensing.
Vasile Postica, Iris Hölken, Viktor Schneider, Victor Kaidas, Oleksandr Polonskyi, Vasillii Cretu, Ion Tiginyanu, Franz Faupel, Rainer Adelung, Oleg Lupan.
Materials Science in Semiconductor Processing, Vol. 49, pp. 20-33 (2016).
27. Synthesis, characterization and DFT studies of zinc-doped copper oxide nanocrystals for gas sensing applications.
V. Cretu, V. Postica, A. K. Mishra, M. Hoppe, I. Tiginyanu, Y. K. Mishra, L. Chow, Nora H. De Leeuw, R. Adelung, and O. Lupan.
Journal of Materials Chemistry A, Vol. 4, pp. 6527-6539 (2016).
28. Influence of CuO nanostructures morphology on hydrogen gas sensing performances.
O. Lupan, V. Postica, N. Ababii, M. Hoppe, V. Cretu, I. Tiginyanu, V. Sontea, Th. Pauporte, B. Viana, R. Adelung.
Microelectronic Engineering, Vol. 164, pp. 63-70 (2016).
29. Magnetic Properties of Microwires and Filiform Nanostructures with Elongated Magnetic Inclusions.
E. Aleinikov, A. Ioisher, D. Makhnovskiy, V. Postolache, I. Tiginyanu, and V. Ursaki.
Surface Engineering and Applied Electrochemistry, Vol. 52, No. 6, pp. 499–508 (2016).
30. Exciton-polariton laser.
S. A. Moskalenko, I. M. Tiginyanu.
Low Temperature Physics, Vol. 42, no 5, pp. 426-437 (2016).
31. Synthesis and characterization of the photosensible $\text{CH}_3\text{NH}_3\text{PbI}_3$ and $\text{CH}_3\text{NH}_3\text{PbI}_{3-x}\text{Cl}_x$ perovskite crystalline films.
I. Plesco, V. Postolache, G. Volodina, V. Zalamai, L. Ghimpu, and I. Tiginyanu.
Surface Engineering and Applied Electrochemistry (2016).
32. Light-induced motion of microengines based on microarrays of TiO_2 nanotubes.
Mihail Enachi, Maria Guix, Vitalie Postolache, Vladimir Ciobanu, Vladimir M. Fomin, Oliver G. Schmidt, Ion Tiginyanu.
Small, Vol. 12, no 39, pp. 5497-5505 (2016).
33. Strong light scattering and broadband (UV to IR) photoabsorption in stretchable 3D hybrid architectures based on Aerographite decorated by ZnO nanocrystallites.
Ion Tiginyanu, Lidia Ghimpu, Vitalie Postolache, Matthias Mecklenburg, Marion A. Stevens-Kalceff, Veaceslav Ursaki, Nader Payami, Robert Feidenhansl, Karl Schulte, Rainer Adelung, and Yogendra K. Mishra.
Scientific Reports, Vol. 6, 32913 (2016).
34. Viability and proliferation of endothelial cells upon exposure to GaN nanoparticles.
Tudor Braniste, Ion Tiginyanu, Tibor Horvath, Simion Raevschi, Serghei Cebotari, Marco Lux, Axel Haverich, Andres Hilfiker.
Belstein Journal of Nanotechnology, Vol. 7, pp. 1330-1337 (2016).
35. Memristive GaN ultrathin suspended membrane array.
Mircea Dragoman, Ion Tiginyanu, Daniela Dragoman, Tudor Braniste, Vladimir Ciobanu.
Nanotechnology, Vol. 27, 295204 (2016).
36. Self-Organized Three-Dimensional Nanostructured Architectures in Bulk GaN Generated by Spatial Modulation of Doping.
Ion Tiginyanu, Marion A. Stevens-Kalceff, Andrei Sarua, Tudor Braniste, Eduard Monaico, Veaceslav Popa, Hugo D. Andrade, James Thomas, Simion Raevschi, Karl Schulte, Rainer Adelung.
ECS Journal of Solid State Science and Technology, Vol. 5, no 5, pp. P218-P227 (2016).
37. The interference of birefringence waves in $\text{ZnAl}_2\text{Se}_4:\text{Co}^{2+}$ crystal.

- N. N. Syrbu, V. V. Zalamai, A. Tiron, I. M. Tiginyanu.
Physics B: Condensed Matter, Vol. 487, pp. 61-67 (2016).
38. Silver-doped zinc oxide single nanowire multifunctional nanosensor with a significant enhancement in response.
 Oleg Lupan, Vasiliu Cretu, Vasile Postica, Mahdi Ahmadi, Beatriz, Roldan Cuenya, Lee Chow, Ion Tiginyanu, Bruno Viana, Thierry Pauporté, Rainer Adelung.
Sensors and Actuators B – Chemical, Vol. 223, pp. 893-903 (2016).
39. Enhanced Ethanol Vapour Sensing Performances of Copper Oxide Nanocrystals with Mixed Phases.
 Oleg Lupan, Vasiliu Cretu, Vasile Postica, Nicolai Ababii, Oleksandr Polonskyi, Victor Kaidas, Fabian Schütt, Yogendra K Mishra, Eduard Monaico, Ion Tiginyanu, Victor Sontea, Thomas Strunskus, Franz Faupel, Rainer Adelung.
Sensors and Actuators B – Chemical, Vol. 224, pp. 434-448 (2016).
40. Flexible Photonic Crystals based on Ultrathin Membranes.
 Ion Tiginyanu
Romanian Reports in Physics, Vol. 67, No. 4, pp. 1319–1321 (2015).
 Invited Paper presented at the ROMOPTO Conference, Report III.I.2. September 1-4, 2015, Bucharest, Romania.
41. Fabrication of photonic crystal circuits based on GaN ultrathin membranes by maskless lithography.
 Olesia Volciuc, Tudor Braniste, Vladimir Sergentu, Veaceslav Ursaki, Ion M. Tiginyanu, and Jürgen Gutowski.
Proceedings of SPIE, Vol. 9519 (Nanotechnology VII), 951904-10 pages (2015), DOI: 10.1117/12.2178525.
42. Heterogeneous Nanocrystallites in Mixed Phases Ga₂O₃/GaN:Ox@SnO₂ forming Shell-Core Nanobelts for Double-Heterojunction Enhanced Sensors.
 Oleg Lupan, Tudor Braniste, Mao Deng, Lidia Ghimpu, Ingo Paulowicz, Yogendra K. Mishra, Lorenz Kienle, Rainer Adelung, Ion Tiginyanu.
Sensors and Actuators B – Chemical, Vol. 221, pp. 544-555 (2015).
43. Three dimensional SnO₂ nanowire networks for multifunctional applications: From high temperature stretchable ceramics to ultrasensitive sensors.
 Ingo Paulowicz, Viktor Hrkac, Sören Kaps, Oleg Lupan, Vasiliu Cretu, Tudor Braniste, Viola Duppel, Ion Tiginyanu, Lorenz Kienle, Rainer Adelung, and Yogendra Kumar Mishra.
Advanced Electronic Materials, Vol. 1, issue 8, 1500081 (2015).
44. Interference of birefractive waves in CdGa₂S₄ crystals.
 N. N. Syrbu, A. V. Tiron, V. I. Parvan, V. V. Zalamai, and I. M. Tiginyanu.
Physica B: Condensed Matter, Vol. 463, pp. 88-92 (2015).
45. Photocatalytic properties of TiO₂ nanotubes doped with Ag, Au and Pt or covered by Ag, Au and Pt nanodots.
 Mihail Enachi, Maria Guix, Tudor Braniste, Vitalie Postolache, Vladimir Ciobanu, Veaceslav Ursaki, Oliver G. Schmidt, and Ion Tiginyanu.
Surface Engineering and Applied Electrochemistry, Vol. 51, no 1, pp. 3-8 (2015).
46. Structure and morphology of the nanoporous ZnO and dark current-voltage characteristics of the glass/(TCO)/ZnO/poly[2,7-(9,9-dioctylfluorene)-alt-(5,5'-bithiophene)]/Ag structure.
 Lidia Ghimpu, Tamara Potlog, Ion Tiginyanu, Aurica Farcas.
Journal of Applied Polymer Science, Vol. 132, issue 33, 42415 (2015).
47. Control of persistent photoconductivity in nanostructured InP via morphology design.
 Eduard Monaico, Vitalie Postolache, Eugeniu Borodin, Veaceslav Ursaki, Oleg Lupan, Rainer Adelung, Kornelius Nielsch, and Ion Tiginyanu.
Semiconductor Science and Technology, Vol. 30, 035014 (2015).
48. Optical reflectance studies of highly specular anisotropic nanoporous (111)InP membrane. J. A. Steele, R. A. Lewis, L. Sirbu, M. Enachi, I. M. Tiginyanu, and V. A. Skuratov.
Semiconductor Science and Technology, Vol. 30, 044003 (2015)
49. Self-assembled monolayer of Au dots deposited on porous semiconductor structures.
 Ion Tiginyanu, Eduard Monaico, and Kornelius Nielsch.
ECS Electrochemistry Letters, Vol. 4, no 4, pp. D8-D10 (2015).
50. Three-dimensional Aerographite-GaN hybrid networks: Single step fabrication of porous and mechanically flexible materials for multifunctional applications.

- Arnim Schuchardt, Tudor Braniste, Yogendra K. Mishra, Mao Deng, Matthias Mecklenburg, Marion A. Stevens-Kalceff, Simion Raevschi, Karl Schulte, Lorenz Kienle, Rainer Adelung, and Ion Tiginyanu. *Scientific Reports*, Vol. 5, 8839 (2015).
51. Interference of birefractive waves in CdGa₂S₄ crystals.
N. N. Syrbu, A. V. Tiron, V. I. Parvan, V. V. Zalamai, and I. M. Tiginyanu.
Physica B: Condensed Matter, Vol. 463, pp. 88-92 (2015).
 52. Photocatalytic properties of TiO₂ nanotubes doped with Ag, Au and Pt or covered by Ag, Au and Pt nanodots.
Mihail Enachi, Maria Guix, Tudor Braniste, Vitalie Postolache, Vladimir Ciobanu, Veaceslav Ursaki, Oliver G. Schmidt, and Ion Tiginyanu.
Surface Engineering and Applied Electrochemistry, Vol. 51, no 1, pp. 3-8 (2015).
 53. Control of persistent photoconductivity in nanostructured InP via morphology design.
Eduard Monaico, Vitalie Postolache, Eugeniu Borodin, Veaceslav Ursaki, Oleg Lupan, Rainer Adelung, Kornelius Nielsch, and Ion Tiginyanu.
Semiconductor Science and Technology, Vol. 30, 035014 (2015).
 54. Optical reflectance studies of highly specular anisotropic nanoporous (111)InP membrane.
J. A. Steele, R. A. Lewis, L. Sirbu, M. Enachi, I. M. Tiginyanu, and V. A. Skuratov.
Semiconductor Science and Technology, Vol. 30, 044003 (2015).
 55. Integration of individual TiO₂ nanotubes in the chip: Nanodevice for hydrogen sensing.
M. Enachi, O. Lupan, T. Braniste, A. Sarua, L. Chow, Y. K. Mishra, D. Gedamu, R. Adelung, and I. Tiginyanu.
Physica Status Solidi – Rapid Research Letters, Volume 9, issue 3, pp. 171-174 (2015).
 56. Metallized porous GaP templates for electronic and photonic applications.
Ion Tiginyanu, Eduard Monaico, Vladimir Sergentu, Andrei Tiron, and Veaceslav Ursaki.
ECS J. Solid State Sci. Technol., Vol. 4, issue 3, pp. P57-P62 (2015).
 57. Retroreflection of light from nanoporous InP: correlation with high absorption.
S. Ya. Prislowski, I. M. Tiginyanu, L. Ghimpu, E. Monaico, L. Sirbu, S. V. Gaponenko.
Applied Physics A, Volume 117, Issue 2, pp 467-470 (2014).
 58. GaN nanostructuring for the fabrication of thin membranes and emerging applications.
Ion Tiginyanu and Veaceslav Ursaki.
Turkish Journal of Physics, Vol. 38, pp. 326-368 (2014).
 59. Structural and vibrational study of pseudocubic CdIn₂Se₄ under compression.
D. Santamaría-Pérez, O. Gomis, A. Pereira, R. Vilaplana, C. Popescu, J. A. Sans, F. J. Manjon, P. Rodriguez-Hernandez, A. Munoz, V.V. Ursaki, I. Tiginyanu.
Journal of Physical Chemistry C, Vol. 118, pp. 26987-26999 (2014).
 60. Structural and vibrational properties of CdAl₂S₄ under high pressure: Experimental and theoretical approach.
Juan Ángel Sans, David Santamaría-Pérez, Catalin Popescu, Oscar Gomis, Francisco Javier Manjón, Rosario Vilaplana, Alfonso Muñoz, Plácida Rodríguez-Hernández, Veaceslav V. Ursaki, and Ion M. Tiginyanu.
Journal of Physical Chemistry C, Vol. 118, pp. 15363-15374 (2014).
 61. Growth of ZnCdS single crystals and prospects of their application as nanoporous structures.
Gleb, Colibaba, Eduard Monaico, Evghenii Goncareenco, Dmitrii Nedeoglo, Ion Tiginyanu, and Kornelius Nielsch.
Semiconductor Science and Technology, Vol. 29, pp. 125003 (2014).
 62. Formation of InP nanomembranes and nanowires under fast anodic etching of bulk substrates.
Eduard Monaico, Ion Tiginyanu, Olesia Volciuc, Thorsten Mehrrens, Andreas Rosenauer, Jürgen Gutowski and Kornelius Nielsch.
Electrochemistry Communications, Vol. 47, pp. 29-32 (2014).
 63. Effect of heavy noble gas ion irradiation on terahertz emission efficiency of InP (100) and (111) crystal planes.
Krunal Radhanpura, Roger Lewis, Lilian Sirbu, Mihail Enachi, Ion Tiginyanu, and Vladimir Skuratov.
Semiconductor Science and Technology, Vol. 29, pp. 095015 (2014).
 64. Versatile Growth of Freestanding Orthorhombic Alpha-Molybdenum Trioxide Nano- and Microstructures by Rapid Thermal Processing for Gas Nanosensors.

- Oleg Lupan, Vasiliu Cretu, Mao Deng, Dawit Gedamu, Ingo Paulowicz, Sören Kaps, Yogendra Kumar Mishra, Oleksandr Polonskyi, Christiane Zamponi, Lorenz Kienle, Viorel Trofim, Ion Tiginyanu, and Rainer Adelung.
Journal of Physical Chemistry C, Vol. 118, no 27, pp. 15068–15078 (2014).
65. Obtaining of II-VI compound substrates with controlled electrical parameters and prospects of their application for nanoporous structures.
Gleb Colibaba, Evghenii Goncareenco, Dmitrii Nedeoglo, Natalia Nedeoglo, Eduard Monaico, and Ion Tiginyanu.
Physica Status Solidi C, Vol. 11, no 9, pp. 1404-1407 (2014).
 66. Investigation of optical properties and electronic transitions in bulk and nano-microribbons of molybdenum trioxide.
O. Lupan, V. Trofim, V. Cretu, I. Stamov, N. N. Syrbu, I. Tiginyanu, Y. K. Mishra, and R. Adelung.
Journal of Physics D: Applied Physics, Vol. 47, 085302 (2014).
 67. A special section on nanotechnologies and nanomaterials for electronic and photonic applications.
Ion Tiginyanu and Rainer Adelung.
Journal of Nanoelectronics and Optoelectronics, Vol. 9, no 2, pp. 193-195 (2014).
 68. Photonic Crystal Structures Based on GaN Ultrathin Membranes.
Olesea Volciuc, Vladimir Sergentu, Ion Tiginyanu, Marco Schowalter, Veaceslav Ursaki, Andreas Rosenauer, Detlef Hommel, and Jürgen Gutowski
Journal of Nanoelectronics and Optoelectronics, Vol. 9, no 2, pp. 271-275 (2014).
 69. Renormalization of the Coulomb Law in an Amorphous System of Metallic Nanospheres and Its Impact on the Electronic Subsystem.
V. V. Sergentu, V. V. Ursaki, and I. M. Tiginyanu.
Journal of Nanoelectronics and Optoelectronics, Vol. 9, no 2, pp. 276-281 (2014).
 70. The Role of Alternating Current on Photo-Assisted Electrochemical Porosification of GaN
Ainorkhilah Mahmood, Naser M. Ahmed, Ion Tiginyanu, Yushamdan Yusof, Yam Fong Kwong, Chuah Lee Siang, and Zainuriah Hassan.
Journal of Nanoelectronics and Optoelectronics, Vol. 9, no 2, pp. 287-290 (2014).
 71. Structural and elastic properties of defect chalcopyrite HgGa_2S_4 under high pressure.
O. Gomis, D. Santamaría-Pérez, R. Vilaplana, R. Luna, J. A. Sans, F. J. Manjón, D. Errandonea, E. Pérez-González, P. Rodríguez-Hernández, A. Muñoz, I. M. Tiginyanu, V. V. Ursaki
Journal of Alloys and Compounds, Vol. 583, pp. 70-78 (2014).
 72. The impact of nanoporation on persistent photoconductivity and optical quenching effects in suspended GaN nanomembranes.
Olesea Volciuc, Tudor Braniste, Ion Tiginyanu, Marion A. Stevens-Kalceff, Jakob Ebeling, Timo Aschenbrenner, Detlef Hommel, Veaceslav Ursaki, and Jürgen Gutowski
Applied Physics Letters, Vol. 103, 243113 (2013).
 73. Design of titania nanotube structures by focused laser beam direct writing.
Mihai Enachi, Marion A. Stevens-Kalceff, Andrei Sarua, Veaceslav Ursaki, and Ion Tiginyanu.
Journal of Applied Physics, Vol. 114, 234302 (2013).
 74. X-ray diffraction study on pressure-induced phase transformations and the equation of state of ZnGa_2Te_4 .
D. Errandonea, R. S. Kumar, O. Gomis, F. J. Manjon, V. V. Ursaki, and I. M. Tiginyanu.
Journal of Applied Physics, Vol. 114, 233507 (2013).
 75. Renormalization of the Coulomb law in anomalous electron transport with giant current density at room temperature.
V. Sergentu, I. Tiginyanu, V. Ursaki.
Romanian Reports in Physics, Vol. 65, No. 3, P. 767–777 (2013).
 76. Excitonic spectra and band structure of CdGa_2Se_4 birefractive crystals.
N.N. Syrbu, I.G. Stamov, V.I. Parvan, V.V. Zalamai, I.M. Tiginyanu.
Physica B: Condensed Matter, Vol. 429, pp. 106–114 (2013).
 77. The band structure of birefractive CdGa_2S_4 crystals.
I.G. Stamov, N.N. Syrbu, V.I. Parvan, V.V. Zalamai, I.M. Tiginyanu.
Optics Communications, Vol. 309, pp. 205–211 (2013).
 78. Cathodoluminescence characterization of suspended GaN nanomembranes.
M. A. Stevens-Kalceff, I. M. Tiginyanu, V. Popa, T. Braniste, and P. Brenner.
Journal of Applied Physics, Vol. 114, 043516 (2013).

79. High-pressure Raman scattering study of defect chalcopyrite and defect stannite ZnGa₂Se₄.
R. Vilaplana, O. Gomis, E. Pérez-González, H. M. Ortiz, F. J. Manjón, P. Rodríguez-Hernández, A. Muñoz, P. Alonso-Gutiérrez, M. L. Sanjuán, V. V. Ursaki, and I. M. Tiginyanu.
Journal of Applied Physics, Vol. **113**, 233501 (2013).
80. Crystal structure of HgGa₂Se₄ under compression.
O. Gomis, R. Vilaplana, F. J. Manjon, D. Santamaria-Perez, D. Errandonea, E. Perez-Gonzalez, J. Lopez-Solano, P. Rodriguez-Hernandez, A. Munoz, I. M. Tiginyanu, and V. V. Ursaki.
Materials Research Bulletin, Vol. 48, no 6, pp. 2128-2133 (2013).
81. Thermally activated cation ordering in ZnGa₂Se₄ single crystals studied by Raman scattering, optical absorption, and ab initio calculations.
R. Vilaplana, O. Gomis, E. Pérez-González, H. M. Ortiz, F. J. Manjón, P. Rodríguez-Hernández, A. Muñoz, P. Alonso-Gutiérrez, M. L. Sanjuán, V. V. Ursaki and I. M. Tiginyanu.
Journal of Physics: Condensed Matter, Vol. 25, no 16, 165802 (2013).
82. Vibrational study of HgGa₂Se₄ under high pressure.
R. Vilaplana, M. Robledillo, O. Gomis, J. A. Sans, F. J. Manjón, E. Pérez-González, P. Rodríguez-Hernández, A. Muñoz, I. M. Tiginyanu, and V. V. Ursaki.
Journal of Applied Physics, Vol. 113, 093512(10), (2013).
83. Lattice Dynamics Study of HgGa₂Se₄ at High Pressures.
R. Vilaplana, O. Gomis, F. J. Manjón, H. M. Ortiz, E. Pérez-González, J. López-Solano, P. Rodríguez-Hernández, A. Muñoz, D. Errandonea, V. V. Ursaki, and I. M. Tiginyanu.
J. Phys. Chem. C, Vol. 117, no 30, pp 15773–15781 (2013).
84. The impact of the discreteness of low-fluence ion beam processing on the spatial architecture of GaN nanostructures fabricated by surface charge lithography.
I.M. Tiginyanu, O. Volciuc, M. A. Stevens-Kalceff, V. Popa, J. Gutowski, S.Wille, R. Adelung, H. Föll.
Surface Engineering and Applied Electrochemistry, Vol. 49, no 1, pp. 1-3 (2013).
85. High-pressure study of the structural and elastic properties of defect-chalcopyrite HgGa₂Se₄.
O. Gomis, R. Vilaplana, F.J. Manjón, D. Santamaria-Pérez, D. Errandonea, E. Pérez-González, J. López-Solano, P. Rodríguez-Hernández, A. Muñoz, I. M. Tiginyanu, and V. V. Ursaki.
Journal of Applied Physics, Vol. 113, 073510 (2013).
86. Synthesis and characterization of Cu-doped ZnO one-dimensional structures for miniaturized sensor applications with faster response.
L. Chow, O. Lupan, G. Chai, H. Khallaf, L.K. Ono, B. Roldan Cuenya, I.M. Tiginyanu, V.V. Ursaki, V. Sontea, and A. Schulte.
Sensors and Actuators A, Vol. 189, pp. 399–408 (2013).
87. Effects of morphology on the emission of photons from GaN membranes fabricated using Surface Charge Lithography.
M. A. Stevens-Kalceff, I. M. Tiginyanu, V. Popa, T. Braniste, and P. Brenner.
Proceedings SPIE, Vol. 8766, 87660I (2013); DOI: 10.1117/12.2017670.
Paper presented at the SPIE Microtechnology – Nanotechnology Conference, Grenoble, France, April 24-26, 2013.
88. Filiform nanostructure technologies based on microwire stretching.
A. M. Ioisher, E. Ya. Badinter, V. Postolache, E. V. Monaico, V. V. Ursaki, V. V. Sergentu, and I. M. Tiginyanu.
Journal of Nanoelectronics and Optoelectronics, Vol. 7, pp. 730-734 (2012).
89. Nanostructured Polymer/CdS photoluminescent thin films.
M. Iovu, I. Tiginyanu, I. Culeac, S. Robu, Iu. Nistor, G. Dragalna, M. Enachi, and P. Petrenko.
Journal of Nanoelectronics and Optoelectronics, Vol. 7, pp. 688-695 (2012).
90. Yellow luminescence and optical quenching of photoconductivity in ultrathin suspended GaN membranes produced by surface charge lithography.
V. Popa, T. Braniste, M. A. Stevens-Kalceff, D. Gerthsen, P. Brenner, V. Postolache, V. Ursaki, and I. M. Tiginyanu.
Journal of Nanoelectronics and Optoelectronics, Vol. 7, pp. 712-718 (2012).
91. UV-blue and green electroluminescence from Cu-doped ZnO nanorod emitters hydrothermally synthesized on p-GaN.
O. Lupan, T. Pauporte, B. Viana, V. V. Ursaki, I. M. Tiginyanu, V. Sontea, and L. Chow.
Journal of Nanoelectronics and Optoelectronics, Vol. 7, pp. 730-734 (2012).

92. Nanofibrous-like ZnO layers deposited by magnetron sputtering and their integration in dye-sensitized solar cells.
O. Lupan, V.M. Guérin, L. Ghimpu, I.M. Tiginyanu, T. Pauporté.
Chemical Physics Letters, Vol. 550, pp. 125-129 (2012).
93. Metal nanostructured ferromagnetic as a possible source of optical magnetism.
V. V. Sergentu, I. M. Tiginyanu and V. V. Ursaki.
Journal of Optics, Vol. 14, no 5, 55703 (2012).
94. Comparative Study of the ZnO and Zn_{1-x}Cd_xO Nanorod Emitters Hydrothermally Synthesized and Electrodeposited on *p*-GaN.
O. Lupan, T. Pauporte, L. Chow, G. Chai, B. Viana, V.V. Ursaki, E. Monaico, I.M. Tiginyanu.
Applied Surface Science, Vol. 259, pp. 399-405 (2012).
95. Two-Dimensional Metallo-Semiconductor Networks for Electronic and Photonic Applications.
Ion Tiginyanu, Eduard Monaico, and Veaceslav Ursaki.
ECS Transactions, Vol. 41, no 44, pp. 67-74 (2012).
96. Crystal Chemistry of CdIn₂S₄, MgIn₂S₄, and MnIn₂S₄ Thiospinels under High Pressure.
David Santamaría-Pérez, Monica Amboage, Francisco J. Manjon, Daniel Errandonea, Alfonso Muñoz, Placida Rodriguez-Hernandez, Andres Mujica, Silvana Elena Radescu, Veaceslav V. Ursaki, and Ion Tiginyanu.
The Journal of Physical Chemistry C, Vol. 116, no 26, pp. 14078-14087 (2012).
97. Processing-induced modification of photo- and cathodoluminescence spectra of TiO₂ Nanotubes.
Mihai Enachi, Marion Stevens-Kalceff, Alexandru Burlacu, Ion Tiginyanu, and Veaceslav Ursaki.
ECS Transactions, Vol. 45, no 5, pp. 167-173 (2012).
98. Metal nanostructured ferromagnetic as a possible source of optical magnetism.
V. V. Sergentu, I. M. Tiginyanu, and V. V. Ursaki.
Journal of Optics A: Pure and Applied Optics, Vol. 14, 055703 (2012).
99. High-pressure optical and vibrational properties of CdGa₂Se₄: order-disorder processes in adamantane compounds.
O. Gomis, R. Vilaplana, F. J. Manjon, E. Perez-Gonzalez, J. Lopez-Solano, P. Rodriguez-Hernandez, A. Munoz, D. Errandonea, J. Ruiz-Fuertes, A. Segura, D. Santamaria-Perez, I. M. Tiginyanu, and V. V. Ursaki.
Journal of Applied Physics, Vol. 111, 013518 (2012).
100. Photoinduced modification of surface states in nanoporous InP.
J. Lloyd-Hughes, S. Müller, G. Scalari, H. Bishop, A. Crossley, M. Enachi, L. Sirbu, and I. M. Tiginyanu.
Applied Physics Letters, Vol. 100, 132106 (2012).
101. Design and maskless fabrication of ultrathin suspended membranes of GaN.
I.M. Tiginyanu, V. Popa, M. A. Stevens-Kalceff, D. Gerthsen, P. Brenner, and D. Pavlidis.
Physica Status Solidi – Rapid Research Letters, Vol. 6, no 4, pp. 148-150 (2012).
102. Microcharacterization of GaN Nanomembranes Using Cathodoluminescence Microanalysis.
M.A. Stevens-Kalceff and I.M. Tiginyanu.
Microscopy and Microanalysis, Vol. 18, Suppl. S2, pp 1836-1837 (2012).
Proc. of the Microscopy and Microanalysis 2012, Phoenix, Arizona, USA, July 29 – August 2, 2012.
Microscopy Society of America, DOI: <http://dx.doi.org/10.1017/S1431927612011038>.
103. Comparative study of hydrothermal treatment and thermal annealing effects on the properties of electrodeposited micro-columnar ZnO thin films.
O. Lupan, T. Pauporte, I.M. Tiginyanu, V. V. Ursaki, V. Sontea, L. K. Ono, B. R. Cuenya, and L. Chow.
Thin Solid Films, Vol. 519, no 22, pp. 7738-7749 (2011).
104. Optical Properties of ZnO electrodeposited nanowire arrays on n- and p-type Si(111): Effects of thermal annealing.
O. Lupan, Th. Pauporte, I.M. Tiginyanu, V.V. Ursaki, H. Heinrich & L. Chow.
Materials Science and Engineering B, Vol. 176, no 16, pp. 1277-1284 (2011).
105. Anomalous retroreflection from strongly absorbing nanoporous semiconductors.
S. Ya. Prislowski, E. K. Naumenko, I.M. Tiginyanu, L. Ghimpu, E. Monaico, L. Sirbu & S. V. Gaponenko.
Optics Letters, Vol. 36, no 16, pp. 3227-3229 (2011).
106. Nanoperforated and Continuous Ultra-Thin GaN Membranes.

- I.M. Tiginyanu, V. Popa & M. A. Stevens-Kalceff.
Electrochemical and Solid State Letters, Vol. 14, no 9, pp. K51-K54 (2011).
107. Quasi-ordered networks of metal nanotubes embedded in semiconductor matrices for photonic applications.
I. M. Tiginyanu, V. V. Ursaki, E. Monaico, M. Enachi, V. V. Sergentu, G. Colibaba, D. D. Nedeoglo, A. Cojocaru, and H. Föll.
Journal of Nanoelectronics and Optoelectronics, Vol. 6, pp. 463-472 (2011).
108. Photoluminescence and Raman study of well-aligned ZnO nanorods on p-Si substrate.
V.V. Ursaki, O. Lupan, I.M. Tiginyanu, G. Chai, and L. Chow.
Journal of Nanoelectronics and Optoelectronics, Vol. 6, pp. 473-477 (2011).
109. Ultra-Thin GaN Membranes Fabricated by Using Surface Charge Lithography.
Ion Tiginyanu, Veaceslav Popa, Marion A. Stevens-Kalceff.
ECS Transactions, Vol. 35, no 6, pp. 13-19 (2011).
110. Porous InP as Piezoelectric Component in Magnetoelectric Composite Sensors.
M.-D. Gerngross, V. Sprincean, M. Leisner, J. Carstensen, H. Föll, and I. Tiginyanu.
ECS Transactions, Vol. 35, no 8, pp. 67-72 (2011).
111. Ultra-thin semiconductor membrane nanotechnology based on surface charge lithography.
Ion Tiginyanu, Veaceslav Popa and Marion A. Stevens-Kalceff.
Proc. of SPIE, Vol. 8068, 806814 (2011).
Bioelectronics, biomedical and bioinspired systems and nanotechnology, A.B. Rodriguez Vazquez, R.A. Carmona Galan, G. Linan Cembrano, A. Adelung, C. Ronning (Eds.), *Proceedings of SPIE*, Vol. 8068, 806814 (2011).
112. Integration of Ge Nanowire Arrays in Glass Micro-Fibers.
A. Ioisher, E. Badinter, E. Monaico, V. Postolache, H. L. Hartnagel, N. Leporda, and I. Tiginyanu.
Surface Engineering and Applied Electrochemistry, Vol. 47, pp. 103-106 (2011).
113. Highly luminescent columnar ZnO films grown directly on *n*-Si and *p*-Si substrates by low-temperature electrochemical deposition.
Oleg Lupan, Thierry Pauporté, V.V. Ursaki, and I.M. Tiginyanu.
Optical Materials, Vol. 33, no 6, pp. 914-919 (2011).
114. Fabrication and characterization of an individual ZnO microwire-based UV photodetector.
G.Y. Chai, L. Chow, O. Lupan, E. Rusu, G.I. Stratan, H. Heinrich, V.V. Ursaki, and I.M. Tiginyanu.
Solid State Sciences, Vol. 13, no 5, pp. 1205-1210 (2011).
115. Nanostructures of Metal Oxides.
I.M. Tiginyanu, O. Lupan, V. V. Ursaki, L. Chow, and M. Enachi.
In: P. Bhattacharya, R. Fornari, H. Kamimura (Eds.), *Comprehensive Semiconductor Science and Technology*, Vol. 3, pp. 396-479. Elsevier Science, Amsterdam, 2011.
116. Birefringence of CuInS₂ crystals.
N. Syrbu, A. Dorogan, V. Ursaki, I. Stamov, and I.M. Tiginyanu.
Optics Communications, Vol. 284, pp. 3552-3557 (2011).
117. Membrane-assisted revelation of the spatial nanoarchitecture of dislocation networks.
Ion Tiginyanu, Veaceslav Popa, and Marion A. Stevens-Kalceff.
Materials Letters, Vol. 65, no 2, pp. 360-362 (2011).
118. Porous II-VI vs. porous III-V semiconductors.
S. Langa, I.M. Tiginyanu, E. Monaico and H. Föll.
Physica Status Solidi C, Vol. 8, no 6, pp. 1792-1796 (2011).
Paper presented at the 7th Int. Conf. „Porous Semiconductors: Science and Technology“, Valencia, Spain, March 14-19, 2010 (Abstract Booklet, pp. 229-230, Paper P1-13).
119. The impact of high energy ion irradiation upon CO gas sensitivity of nanostructured GaN epilayers.
O. S. Volciuc, V. Popa, I. M. Tiginyanu, V. A. Skuratov, M. Cho, and D. Pavlidis.
Surface Engineering and Applied Electrochemistry, Vol. 46, no 6, pp. 535-537 (2010).
120. Heavy noble Gas (Kr, Xe) Irradiated (111) InP Nanoporous Honeycomb Membranes with Superior Optical Nonlinearity and Enhanced Ultrafast All-Optical Terahertz Emission.
Krunal Radhanpura, Stuart Hargreaves, Roger A. Lewis, L. Sirbu, and Ion M. Tiginyanu.
Applied Physics Letters, Vol. 97, 181921 (2010).
121. Epitaxial Electrodeposition of ZnO Nanowire Arrays on p-GaN for Efficient UV-Light-Emitting Diode Fabrication.

- O. Lupan, T. Pauporte, B. Viana, I. M. Tiginyanu, V. V. Ursaki, and R. Cortes.
ACS Applied Materials and Interfaces, Vol. 2, no 7, pp. 2083-2090 (2010).
122. Self-organized nucleation layer for the formation of ordered arrays of double-walled TiO₂ nanotubes with temperature controlled inner diameter.
Mihai Enachi, Ion Tiginyanu, Veaceslav Sprincean, and Veaceslav Ursaki.
Physica Status Solidi – Rapid Research Letters, Vol. 4, no 5-6, pp. 100-102 (2010).
123. Morphology, luminescence, and electrical resistance response to H₂ and CO gas exposure of porous InP membranes prepared by electrochemistry in a neutral electrolyte.
O. Volciuc, E. Monaico, M. Enachi, V. V. Ursaki, D. Pavlidis, V. Popa, and I. M. Tiginyanu.
Applied Surface Science, Vol. 257, pp. 827-831 (2010).
124. Cathodoluminescence of TiO₂ nanotubes prepared by low-temperature anodization of Ti foils.
Mihai Enachi, Marion Stevens-Kalceff, Ion Tiginyanu, and Veaceslav Ursaki.
Materials Letters, Vol. 64, no 20, pp. 2155-2158 (2010).
125. Exceptional Integration of Metal or Semimetal Nanowires in Human-Hair-Like Glass Fiber.
E. Badinter, A. Ioisher, E. Monaico, V. Postolache, and I. M. Tiginyanu.
Materials Letters, Vol. 64, pp. 1902-1904 (2010).
126. Well-aligned arrays of vertically oriented ZnO nanowires electrodeposited on ITO-coated glass and their integration in dye sensitized solar cells.
O. Lupan, V.M. Guerin, I.M. Tiginyanu, V.V. Ursaki, L. Chow, H. Heinrich, T. Pauporte.
Journal of Photochemistry and Photobiology A: Chemistry, Vol. 211, no 1, pp. 65-73 (2010).
127. Ultraviolet photoconductive sensor based on single ZnO nanowire.
O. Lupan, G. Chai, L. Chow, G. A. Emelchenko, H. Heinrich, V. V. Ursaki, A. N. Gruzintsev, A. N. Redkin.
Physica Status Solidi (a), Vol. 207, no 7, pp. 1735-1740 (2010).
128. Synthesis and characterization of ZnO nanowires for nanosensor applications.
O. Lupan, G.A. Emelchenko, V.V. Ursaki, G. Chai, A.N. Redkin, A.N. Gruzintsev, I.M. Tiginyanu, L. Chow, L.K. Ono, B. Roldan Cuenya, H. Heinrich, E.E. Yakimov.
Materials Research Bulletin, Vol. 45, no 8, pp. 1026-1032 (2010).
129. Impact of size upon lasing in ZnO microtetrapods.
V. V. Zalamai, V. V. Ursaki, I. M. Tiginyanu, A. Burlacu, E. V. Rusu, C. Klingshirn, J. Fallert, J. Sartor and H. Kalt.
Applied Physics B: Lasers and Optics, Vol. 99, pp. 215-222 (2010).
130. Nonlinear pressure dependence of the direct band gap in adamantane ordered-vacancy compounds.
F. J. Manjon, O. Gomis, P. Rodriguez-Hernandez, E. Perez-Gonzalez, A. Munoz, D. Errandonea, J. Ruiz-Fuertes, A. Segura, M. Fuentes-Cabrera, I. M. Tiginyanu, and V. V. Ursaki.
Physical Review B, Vol. 81, 195201 (2010).
131. Selective hydrogen gas nanosensor using individual ZnO nanowire with fast response at room temperature.
O. Lupan, V.V. Ursaki, G. Chai, L. Chow, G.A. Emelchenko, I.M. Tiginyanu, A.N. Gruzintsev, A.N. Redkin.
Sensors and Actuators B: Chemical, Vol. 144, no 1, pp. 56-66 (2010).
132. Refractive index dispersion deduced from lasing modes in ZnO microtetrapods.
V.V. Ursaki, V.V. Zalamai, I.M. Tiginyanu, A. Burlacu, E.V. Rusu, and C. Klingshirn.
Applied Physics Letters, Vol. 95, 171101 (2009).
133. Guided mode lasing in ZnO nanorod structures.
V.V. Ursaki, V.V. Zalamai, A. Burlacu, J. Fallert, C. Klingshirn, H. Kalt, G.A. Emelchenko, A.N. Redkin, A.N. Gruzintsev, E.V. Rusu, and I.M. Tiginyanu.
Superlattices and Microstructures, Vol. 46, pp. 513–522 (2009).
134. Random lasing in nanostructured ZnO produced from bulk ZnSe.
V.V. Ursaki, V.V. Zalamai, A. Burlacu, C. Klingshirn, E. Monaico, and I.M. Tiginyanu.
Semiconductor Science and Technology, Vol. 24, 085017 (2009).
135. Design and Characterization of Novel Focusing Elements based on Photonic Metamaterials.
I. M. Tiginyanu, E. Foca, V. V. Sergentu, V. V. Ursaki, F. Daschner, R. Knöchel, and H. Föll.
Journal of Nanoelectronics and Optoelectronics, Vol. 4, pp. 20-39 (2009).
136. Novel phosphors based on porous materials.
I.M. Tiginyanu, V.V. Ursaki, L. Sirbu, M. Enaki, E. Monaico.

- Physica Status Solidi C*, Vol. 6, no. 7, pp. 1587-1591 (2009).
137. A comparative study of guided modes and random lasing in ZnO nanorod structures. V. V. Ursaki, V. V. Zalamai, A. Burlacu, J. Fallert, C. Klingshirn, H. Kalt, G. A. Emelchenko, A. N. Redkin, A. N. Gruzintsev, E.V. Rusu & I. M. Tiginyanu. *Journal of Physics D: Applied Physics*, Vol. 42, 095106 (2009).
138. Luminescent materials based on semiconductor compound templates for random laser applications. V.V. Ursaki, I.M. Tiginyanu, L. Sirbu, M. Enachi. *Physica Status Solidi C*, Vol. 6, no 5, pp. 1097-1104 (2009).
139. Raman scattering by porous structures with InAs quantum dots. Alexander Milekhin, Veaceslav Ursaki, Lilian Sirbu, Alexander Toropov, Ion Tiginyanu, Dietrich R. T. Zahn. *Physica Status Solidi C*, Vol. 6, no 4, pp. 883-885 (2009).
140. Self-induced oscillation of the macropore diameter in n-type silicon. Ala Cojocaru, Jürgen Carstensen, Malte Leisner, Helmut Föll, Ion Tiginyanu. *Physica Status Solidi C*, Vol. 6, no. 7, pp. 1533-1535 (2009).
141. Whispering gallery modes and random lasing in ZnO microstructures. Veaceslav V. Ursaki, A. Burlacu, E.V. Rusu, V. Postolache & Ion M. Tiginyanu. *Journal of Optics A: Pure and Applied Optics*, Vol. 11, 075001 (2009).
142. ZnSe-based conductive nanotemplates for nanofabrication. Eduard Monaico, Petru Tighineanu, Sergiu Langa, Hans L. Hartnagel & Ion Tiginyanu. *Physica Status Solidi – Rapid Research Letters*, Vol. 3, no. 4, pp. 97–99 (2009).
143. Surface charge lithography for GaN micro- and nanostructuring. Ion M. Tiginyanu, Veaceslav Popa, Andrei Sarua, Peter J. Heard, Olesea Volciuc, Martin Kuball. *Proceedings SPIE*, Vol. 7216, 72160Y (2009). Invited paper presented at SPIE Photonics West Conference, Report 7216-34, January 24-29, 2009, San Jose, California, USA.
144. Terahertz conductivity of magnetoexcitons and electrons in semiconductor nanostructures. J. Lloyd-Hughes, J. Faist, H.E. Beere, D.A. Ritchie, L. Sirbu, I.M. Tiginyanu, S.K.M. Merchant & M.B. Johnston. *Proceedings SPIE*, Vol. 7214, 72140N (2009). Invited paper presented at SPIE Photonics West Conference, Report 7214-22, January 24-29, 2009, San Jose, California, USA.
145. Superlensing with plane plates consisting of dielectric cylinders in glass envelopes. E. Foca, V.V. Sergentu, F. Daschner, I. M. Tiginyanu, V. V. Ursaki, R. Knöchel, H. Föll. *Physica Status Solidi A*, Vol. 206, pp. 140-146 (2009).

Brevete de invenție (2009 – prezent)

1. V. Hotineanu, A. Scorpan, A. Cazac, I. Tighineanu, V. Popa, T. Braniste, Metodă de stimulare a motilității tractului gastro-intestinal, Brevet de invenție Nr. 4307, 2015.05.3131.
2. Mihai Enachi, Ion Tighineanu, Veaceslav Ursachi, Procedeu de obținere a nanotuburilor din dioxid de titan pe suport de titan, Brevet de invenție Nr. 4063, 2011.04.30.
3. A. Ioișer, E. Badinter, I. Tighineanu, Procedeu de confecționare a nanostructurii filiforme, Brevet de invenție Nr. 4046, 2009.08.31
4. Sîrbu Lilian, Ursachi Veaceslav, Monaico Elena, Tighineanu Ion. Procedeu de obținere a microlaserului aleatoriu. Brevet de invenție Nr. 3822; 2009.09.30.
5. Monaico Eduard, Tighineanu Ion, Ursachi Veaceslav, Postolache Vitalie. Procedeu de obținere a zonelor nanostructurale semiconductoare. Brevet de invenție Nr. 3811; 2009.09.30.
6. Ursachi Veaceslav, Rusu Emil, Stratan Gheorghe, Burlacu Alexandru, Tighineanu Ion. Procedeu de obținere a microlaserului aleatoriu. Brevet de invenție Nr. 3789; 2009.08.31.
7. Enachi Mihail, Ursachi Veaceslav, Tighineanu Ion, Burlacu Alexandru, Procedeu de obținere a microlaserului aleatoriu. Brevet de invenție Nr. 3714; 2009.05.31.
8. Enachi Mihail, Tighineanu Ion, Ursachi Veaceslav, Monaico Eduard, Procedeu de obținere a nanostructurilor tubulare de oxid de aluminiu pe suport de aluminiu. Brevet de invenție Nr. 3705; 2009.05.31.