



## Artem Babaryk

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## Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Artem Babaryk. b 1983. M.Sc.(Cum Laude), 2005, Taras Shevchenko National University of Kyiv. He has obtained his PhD working on complex phosphates of niobium and tantalum (under supervision of Prof. Nikolay Slobodyanik), 2009 at Taras Shevchenko National University of Kyiv. Since 2007, a after 2009 - Research Technician and Junior Research Fellow (competitive basis) at the Department of Chemistry. June–September 2010, guest scientist with a research fellowship at Max Planck Institute of Chemical Physic of Solids. In 2013 he performed short post-doctoral stay at CICECO - Aveiro Institute of Materials, University of Aveiro, under supervision of Dr. Luis Mafra. From 2014 - Research Fellow (appointed by Scientific Selection Committee), and from 2017 - Postdoctoral Reseacher at the Unit of Advanced Porous Materials of IMDEA Energy Institute. Published 22 international publications and peer-reviewed conference contributions listed at the SCI (44% of the first quartile Q1) in the field of chemistry and crystallography of molecular and condensed matter. He has been involved in several international research projects in Spain, Poland, France, Germany and USA (2 as PI, 1 as Co-PI).



## General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Dr. Artem Babaryk ( $h = 5$ ) has published a total of 25 scientific articles and peer-reviewed conference proceedings, 16 of them as corresponding author and, 11 those belongs to the first quartile (Q1). In particular, Nano Research (8.18), J. Mater. Chem C (IF 6.64), 2 Inorg. Chem. (IF 4.76), Cryst. Growth Des. (4.09), Dalton Trans. (IF 4.03), 3 CrystEngComm (IF 3.85), During the period 2009-2019 1 Ph.D., 2 M.Sc. and 3 B.Sc. have been succesfully graduated under his co-supervision. He has participated in several national, non-european international conference meetings as main contributing author, national, european and non-european international scientific projects (2 as PI), and european and overseas large-scale collective facilities (ILL, ESRF, DESY, APS) as co-proposer or experiment team member.

## Artem Babaryk

Surname(s): **Babaryk**  
Name: **Artem**  
ORCID: **0000-0003-3886-3613**  
ScopusID: **15059849400**

### Previous positions and activities

	Employing entity	Professional category	Start date
1	FUNDACIÓN IMDEA ENERGIA	Post-doctoral Researcher	16/03/2017
2	Taras Shevchenko National University of Kyiv	Research Fellow	01/10/2014
3	Taras Shevchenko National University of Kyiv	Junior Research Fellow	01/12/2009
4	Taras Shevchenko National University of Kyiv	Research Technician	03/12/2007

- 1** **Employing entity:** FUNDACIÓN IMDEA ENERGIA **Type of entity:** R&D Centre  
**Department:** Material Porosos Avanzados, FUNDACIÓN IMDEA ENERGIA  
**City employing entity:** Móstoles (Madrid), Community of Madrid, Spain  
**Professional category:** Post-doctoral Researcher **Educational Management (Yes/No):** Yes  
**Start-End date:** 16/03/2017 - 31/12/2019 **Duration:** 2 years - 9 months - 15 days  
**Type of contract:** Temporary employment contract  
**Performed tasks:** IMDEA Energy Institute, Móstoles (Spain) - planning and performing experimental tasks - characterization of the compounds and materials using analytical instruments - writing scientific publications in peer-reviewed journals and presenting results at scientific meetings - application for external funding sources - guiding of B. Sc., M. Sc. and Ph.D. students  
**Field of management activity:** Spanish Autonomous Region
- 2** **Employing entity:** Taras Shevchenko National University of Kyiv **Type of entity:** University  
**Professional category:** Research Fellow  
**Start-End date:** 01/10/2014 - 06/03/2017
- 3** **Employing entity:** Taras Shevchenko National University of Kyiv **Type of entity:** University  
**Professional category:** Junior Research Fellow  
**Start-End date:** 01/12/2009 - 30/09/2014
- 4** **Employing entity:** Taras Shevchenko National University of Kyiv **Type of entity:** University  
**Professional category:** Research Technician  
**Start-End date:** 03/12/2007 - 30/11/2009



## Education

### University education

#### 1st and 2nd cycle studies and pre-Bologna degrees

**University degree:** Higher degree

**Name of qualification:** Master of Science

**Degree awarding entity:** Taras Shevchenko National University of Kyiv  
**Type of entity:** University

**Date of qualification:** 24/06/2005

#### Doctorates

**Doctorate programme:** Doctor of Philosophy (Candidate of Sciences)

**Degree awarding entity:** Supreme Certifying Commission of Ukraine  
**Type of entity:** State agency

**Date of degree:** 27/05/2009

### Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Spanish	B1	B1	B1	B1	B1
English	B2	B2	B2	B2	B2

## Teaching experience

### Experience supervising doctoral thesis and/or final year projects

- Project title:** Diseño y síntesis de semiconductores ópticamente activados en halogenuros de bismuto (III) para aplicaciones en energías sostenibles

**Type of project:** End of course project

**Co-director of thesis:** Artem Babaryk; Patricia Horcajada; David Ávila Brande

**Entity:** Universidad Complutense de Madrid  
**Type of entity:** University

**City of entity:** Madrid, Community of Madrid, Spain

**Student:** Jorge Muñoz Nieto

**Identify key words:** Materials

**Date of reading:** 13/06/2019
- Project title:** Diseño y síntesis de semiconductores ópticamente activos basados en halogenuros de bismuto (III) para aplicaciones en energía sostenible

**Type of project:** End of course project



**Co-director of thesis:** Artem Babaryk; Patricia Horcajada; David Ávila Brande  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**City of entity:** Madrid, Community of Madrid, Spain  
**Student:** Jaime Cuesta Aguirre  
**Date of reading:** 21/06/2018

**3** **Project title:** Synthesis and semiconducting group of  $AB_2O_3[XO_4]_2$  (A = Sr, Ba; B = Nb, Ta; X = P, V)  
**Type of project:** End of course project  
**Co-director of thesis:** Artem Babaryk; Nikolay Slobodyanik  
**Entity:** Taras Shevchenko National University of Kyiv **Type of entity:** University  
**City of entity:** Kyiv, Ukraine  
**Student:** Natalia Soloviova  
**Obtained qualification:** Master of Sciences  
**Identify key words:** Inorganic chemistry  
**Date of reading:** 18/06/2015  
**European doctorate:** 22/06/2015  
**Date of award:** 22/06/2015

**4** **Project title:** Wide band gap phosphate of  $Na_6TiM_7O_{15}(PO_4)_5$  (M = Nb, Ta) composition  
**Type of project:** End of course project  
**Co-director of thesis:** Nikolay Slobodyanik; Artem Babaryk  
**Entity:** Taras shevchenko National University of Kyiv **Type of entity:** University  
**City of entity:** Kyiv, Ukraine  
**Student:** Igor Birskaa  
**Obtained qualification:** Bachelor of Sciences  
**Identify key words:** Inorganic chemistry  
**Date of reading:** 11/06/2015  
**European doctorate:** 22/06/2015  
**Date of award:** 22/06/2015

**5** **Project title:** Tantalum-containing phosphate with structures of monophosphate tungsten bronzes  
**Type of project:** End of course project  
**Co-director of thesis:** Artem Babaryk; Nikolay Slobodyanik  
**Entity:** Taras Shevchenko National University of Kyiv **Type of entity:** University  
**City of entity:** Kyiv, Ukraine  
**Student:** Olena Doroshenko  
**Obtained qualification:** Master of Sciences  
**Identify key words:** Inorganic chemistry  
**Date of reading:** 16/05/2012  
**European doctorate:** 25/06/2012  
**Date of award:** 25/06/2012

**6** **Project title:** Synthesis, structure and properties of framework complex oxides of niobium and tantalum  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** Nikolay Slobodyanik; Artem Babaryk  
**Entity:** Taras Shevchenko National University of Kyiv  
**City of entity:** Kyiv, Ukraine  
**Student:** levgen Odynets  
**Obtained qualification:** doctor of Philosophy (Candidate of Sciences)  
**Identify key words:** Inorganic chemistry  
**Date of reading:** 20/10/2011



European doctorate: 20/01/2012

Date of award: 20/01/2012

## Scientific and technological experience

### Scientific or technological activities

#### R&D projects funded through competitive calls of public or private entities

- 1** **Name of the project:** Materiales, Dispositivos y Tecnologías para el Desarrollo de la Industria Fotovoltaica  
**Entity where project took place:** FUNDACIÓN IMDEA ENERGIA  
**City of entity:** Móstoles, Madrid, Community of Madrid, Spain  
**Name principal investigator (PI, Co-PI...):** Antonio Martí Vega; Ignacio Antón Hernández; Carlos Algora del Valle; Luis Navarte Fernández; Enrique San Andrés Serrano; Jose María Ripalda Cobián; Isabel Rodríguez Fernández; Ignacio Tobías Galicia; Artem Babaryk  
**Start-End date:** 01/01/2019 - 31/12/2022  
**Total amount:** 943.850 €
- 2** **Name of the project:** Design of Lead-Free Halide Perovskite-Based Nanocomposites For Solar Energy Conversion And Optical Applications  
**Entity where project took place:** FUNDACIÓN IMDEA ENERGIA  
**City of entity:** Mostoles, Community of Madrid, Spain  
**Nº of researchers:** 1  
**Start-End date:** 16/03/2017 - 29/12/2017  
**Total amount:** 33.065,38 €
- 3** **Name of the project:** Materiales funcionales: diseño, síntesis y caracterización de sólidos con interés estratégico  
**Geographical area:** National  
**Degree of contribution:** Researcher  
**Entity where project took place:** University of Oviedo      **Type of entity:** University  
**City of entity:** Oviedo, Principality of Asturias, Spain  
**Name principal investigator (PI, Co-PI...):** Santiago Garcia-Granda; Jose Ruben Garcia Meñendez  
**Nº of researchers:** 23  
**Start-End date:** 01/01/2014 - 31/01/2017  
**Total amount:** 332.626,53 €
- 4** **Name of the project:** Patterns of Inorganic Oxides and Salts Based on Oxoanions  
**Entity where project took place:** Taras Shevchenko National University of Kyiv      **Type of entity:** University  
**City of entity:** Kyiv, Ukraine  
**Nº of researchers:** 4  
**Funding entity or bodies:** The International Centre for Diffraction Data      **Type of entity:** R&D Centre  
**City funding entity:** Newtown Square, United States of America  
**Start-End date:** 01/10/2014 - 30/09/2015  
**Total amount:** 4.700 €



**5 Name of the project:** Complex Inorganic Salts Based on Tetrahedrally-coordinated Oxoanions**Entity where project took place:** Taras Shevchenko **Type of entity:** University  
National University of Kyiv**City of entity:** Kyiv, Ukraine**Name principal investigator (PI, Co-PI....):** Artem Babaryk**N° of researchers:** 4**Funding entity or bodies:**

The International Centre for Diffraction Data

**Type of entity:** R&D Centre**City funding entity:** Newtown Square, United States of America**Start-End date:** 01/04/2012 - 31/03/2013**Total amount:** 880 €

## Scientific and technological activities

### Scientific production

#### Publications, scientific and technical documents

- 1** Rim Jaballi; Dhieb Atoui; Wassim Maalej; Artem Babaryk; Patricia Horcajada; Ridha Ben Salem; Zakaria Elaoud. A new mononuclear nickel complex with 5,5'-dimethyl-2,2'-bipyridine: Synthesis, structural investigation and catalytic properties. *Journal of Molecular Structure*. 1219, pp. 128572. Elsevier B.V., 05/11/2020.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 2** Pablo Salcedo-Abraira; Sérgio Vilela; Artem Babaryk; María Cabrero-Antonino; Pedro Gregorio; Fabrice Salles; Sergio Navalón; Hermenegildo García; Patricia Horcajada. Nickel phosphonate MOF as efficient water splitting photocatalyst. *Nano Research*. 14, pp. 450 - 457. Springer Nature Switzerland AG, 21/09/2020.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 3** Artem Babaryk; Mohamed Haouas; Olena Khaynakova; Erik Elkaïm; Patricia Horcajada. Bis-3,5-Diamino-1,2,4-Triazolyl-1,2,4,5-Tetrazine: From Insensitive High Energy Density Materials to Small Molecule Organic Semiconductors. *Crystal Growth & Design*. 20 - 10, pp. 6510 - 6518. American Chemical Society, 25/08/2020.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 4** Artem Babaryk; Oscar Contreras Almengor; María Cabrero-Antonio; Sergio Navalón; Hermenegildo García; Patricia Horcajada. A Semiconducting Bi<sub>2</sub>O<sub>2</sub>(C<sub>4</sub>O<sub>4</sub>) Coordination Polymer Showing a Photoelectric Response. *Inorganic Chemistry*. 59 - 6, pp. 3406 - 3416. American Chemical Society, 20/02/2020.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 5** Ievgen Odynets; Sergiy Khainakov; Santiago Garcia-Granda; Roman Gumeniuk; Matthias Zschornak; Natalia Soloviova; Mykola Slobodyanik; Patricia Horcajada; Artem Babaryk. The crystal structure of visible light absorbing piezoelectric semiconductor SrNb<sub>2</sub>V<sub>2</sub>O<sub>11</sub> revisited: High-resolution X-ray diffraction, vibrational spectroscopy and computational study. *Journal of Materials Chemistry C*. 7 - 18, pp. 5497 - 5505. Royal Society of Chemistry, 18/04/2019.





**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** Yes

- 6** Sérgio Vilela; Artem Babaryk; Rim Jaballi; Fabrice Salles; Marta Mosquera; Zakaria Elaoud; Stijn Van Cleuvenbergen; Thierry Verbiest; Patricia Horcajada. A Nonlinear Optically Active Bismuth–Camphorate Coordination Polymer. *European Journal of Inorganic Chemistry*. 2018 - 20-21, pp. 2437 - 2443. WILEY-VCH Verlag GmbH & Co. KGaA, 16/04/2018.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** No

- 7** Robert Paria Sena; Artem Babaryk; Sergei Khainakov; Santiago Garcia-Granda; Nikolay Slobodyanik; Gustav Van Tendeloo; Artem Abakumov; Joke Hadermann. A pseudo-tetragonal tungsten bronze superstructure: A combined solution of the crystal structure of  $K_6.4(Nb,Ta)_{36.3}O_{94}$  with advanced transmission electron microscopy and neutron diffraction. *Dalton Transactions*. 45 - 3, pp. 973 - 979. The Royal Chemical Society, 2016.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** Yes

- 8** Mariana Sardo; Sergio Santos; Artem Babaryk; Concepción Lopez; Ibon Alkorta; Jose Elguero; Rosa Claramunt; Luis Mafra. Diazole-based powdered cocrystal featuring a helical hydrogenbonded network: Structure determination from PXRD, solid-state NMR and computer modeling. *Solid State Nuclear Magnetic Resonance*. 65, pp. 49 - 63. Elsevier B.V., 2015.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** Yes

- 9** Artem Babaryk; Ievgen Odynets; Sergei Khainakov; Santiago Garcia-Granda; Nikolay Slobodyanik. Polyanionic identity of  $Ca_2Zn_2(V_3O_{10})(VO_4)$  photocatalyst manifested by X-ray powder diffraction and periodic boundary density functional theory calculations. *CrystEngComm*. 17 - 40, pp. 7772 - 7777. The Royal Chemical Society, 2015.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** No

- 10** Jolanta Jaciubek-Rosińska; Aleksander Kufelnicki; Stefania Tomyń; Artem Babaryk; Jan Jaszczak; Cecylia Wardak; Matti Haukka; Igor Fritsky. Synthesis, solid state and solution studies of zinc(II) complexes with 2-hydroxyiminopropanoic acid (HPA). *Polyhedron*. 95 - 27, pp. 40 - 44. Elsevier B.V., 2015.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** Yes

- 11** Artem Babaryk; Ievgen Odynets; Sergei Khainakov; Nikolay Slobodyanik. Synthesis and X-ray powder diffraction data of  $Ba_{2.64}Ta_{11.25}O_{30.81}$ . *Powder Diffraction*. 29 - 4, pp. 385 - 388. Cambridge University Press, 2014.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** No

- 12** Ganna Senchyk; Andrey Lysenko; Artem Babaryk; Eduard Rusanov; Harald Krautscheid; Patricia Neves; Anabela Valente; Isabel Gonçalves; Karl Krämer; Shi-Xia Liu; Silvio Decurtins; Konstantin Domasevitch. Triazolyl-based copper-molybdate hybrids: From composition space diagram to magnetism and catalytic performance. *Inorganic Chemistry*. 53 - 19, pp. 10112 - 10121. The American Chemical Society, 2014.

**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** No

- 13** Artem Babaryk; Ievgen Odynets; Sergei Khainakov; Nikolay Slobodyanik; Santiago Garcia-Granda. A wide band gap semiconductor synthesized in molybdate flux medium. *CrystEngComm*. 15 - 27, pp. 5539 - 5544. The Royal Chemical Society, 2013.

**Type of production:** Scientific paper

**Format:** Journal



**Corresponding author:** No

- 14** Artem Babaryk; Aleksandra Kozachkova; Nataliya Tsaryk; Anatoli Dudko; Vasyl Pekhnyo. Binary salt of a palladium(II) complex with (phosphono-methyl)phosphonic (medronic) acid comprising handbell-like  $[Pd\{-CH_2(PO_3)_2\}]_3$  units. *Acta Crystallographica Section C: Crystal Structure Communications*. 68 - 9, pp. m242 - m245. IUCr, 2012.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 15** Artem Babaryk; Ievgen Odynets; Nikolay Slobodyanik; Vyacheslav Baumer; Sergei Khainakov. Structure-driven mixed-site borate-phosphate  $K_5Ta_8BP_4O_{34}$ : Synthesis, structural, spectroscopic and theoretical study. *CrystEngComm*. 14 - 15, pp. 5071 - 5077. 2012.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 16** Ievgen Odynets; Artem Babaryk; Vyacheslav Baumer; Nikolay Slobodyanik; Oleg Shishkin. Synthetic, structural, and spectroscopic investigations of  $K_3Nb_8O_{21}$ -type complex oxides  $K_3MTa_7O_{21}$  (M = Ti, Zr). *Zeitschrift für Anorganische und Allgemeine Chemie*. 637 - 11, pp. 1511 - 1515. Wiley-VCH Verlag GmbH & Co. KGaA, 2011.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 17** Artem Babaryk; Volodymyr Bon; Igor Zatovsky; Nikolay Slobodyanik; Vasyl Pekhnyo. Reinvestigation of  $KMg_1/3Nb_2/3OPO_4$ . *Acta Crystallographica Section E: Structure Reports Online*. 66 - 3, pp. i15 - i16. IUCr, 2010.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 18** Nataliya Strutynska; Vyacheslav Baumer; Igor Zatovsky; Artem Babaryk; Nikolay Slobodyanik. The triple pyrophosphate  $Cs_3CaFe(P_2O_7)_2$ . *Acta Crystallographica Section C: Crystal Structure Communications*. 66 - 4, pp. i39 - i41. IUCr, 2010.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 19** Artem Babaryk; Igor Zatovsky; Nikolay Slobodyanik; Ivan Ogorodnyk. Synthesis, structure and magnetic characterization of a new phosphate  $K_{1.84}Fe_{1.42}Nb_{0.58}(PO_4)_3$  with the langbeinite- type structure. *Zeitschrift für Naturforschung - Section B Journal of Chemical Sciences*. 63 - 3, pp. 345 - 348. Walter de Gruyter, 2008.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 20** Artem Babaryk; Igor Zatovsky; Vyacheslav Baumer; Nikolay Slobodyanik; Pavlo Nagorny; Oleg Shishkin. Novel KTP-like complex phosphates  $KMn_{0.33}Nb_{0.67}PO_5$  (Mn-Mn, Co). *Journal of Solid State Chemistry*. 180 - 7, pp. 1990 - 1997. Elsevier B.V., 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 21** Artem Babaryk; Igor Zatovsky; Vyacheslav Baumer; Nikolay Slobodyanik; Konstantin Domasevitch. The complex phosphate  $K_{0.92}In_{0.46}Nb_{0.54}OPO_4$ : A new -representative of the  $KTiOPO_4$  family. *Acta Crystallographica Section C: Crystal Structure Communications*. 63 - 11, pp. i105 - i108. IUCr, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 22** Artem Babaryk; Igor Zatovsky; Vyacheslav Baumer; Nikolay Slobodyanik; Oleg Shishkin. Centrosymmetric aliovalent KTP isomorphs  $KM_{0.5}InNb_{0.5}OPO_4$  (M = Cr and Fe). *Acta Crystallographica Section C: Crystal Structure Communications*. 62 - 11, pp. i91 - i93. IUCr, 2006.



**Type of production:** Scientific paper

**Format:** Journal

**Corresponding author:** No

- 23** Ievgen Odynets; Sergei Khainakov; Alla Dikhtiarenko; Artem Babaryk; Nikolay Slobodyanik. Synthesis and photocatalytic properties of U3O8-type complex oxides Ag2M4O11 (M = Nb, Ta). International Conference on Oxide Materials for Electronic Engineering - Fabrication, Properties and Applications, OMEE 2014. pp. 223 - 224. Lviv Polytechnic Publishing, 2014.

**Type of production:** Book of Conference Proceedings **Format:** Book

**Corresponding author:** No

- 24** Ievgen Odynets; Olena Doroshenko; Artem Babaryk; Nikolay Slobodyanik; Sergei Khainakov; Vyacheslav Baumer. Synthesis and structural investigations of tantalates phosphates in the flux system Na2O-P2O5-Ta2O5-MoO3. International Conference on Oxide Materials for Electronic Engineering, OMEE 2012. pp. 107 - 108. Lviv Polytechnic Publishing, 2012.

**Type of production:** Book of Conference Proceedings **Format:** Book

- 25** Artem Babaryk; Ievgen Odynets; Vyacheslav Baumer; Nikolay Slobodyanik; Sergei Khainakov; Stefan Hoffmann. Synthesis and structural relationship of complex tantalum phosphates in the flux system K2O-P2O5-Ta2O5-MoO3. International Conference on Oxide Materials for Electronic Engineering, OMEE 2012. pp. 99 - 100. Lviv Polytechnic Publishing, 2012.

**Type of production:** Book of Conference Proceedings **Format:** Book

## Works submitted to national or international conferences

- 1** **Title of the work:** Robust lead-free one-dimensional bismuth halides as potential absorbers for tandem solar cells

**Name of the conference:** NEXTGEN2019 Next Generation High Efficiency Photovoltaics International School and Workshop

**Corresponding author:** No

**City of event:** Palma, Balearic Islands, Spain

**Date of event:** 01/10/2019

**End date:** 04/10/2019

**Organising entity:** Instituto de Investigación en Energía de Cataluña **Type of entity:** Public Research Body

**City organizing entity:** Barcelona, Catalonia, Spain

Artem Babaryk; Marta Elena González Mosquera; Patricia Horcajada Cortes.

- 2** **Title of the work:** 3,6-bis-(3,5-dimethyl-pyrazol-1-yl)-1,2,4,5-tetrazine high dielectric molecular semiconductor for excitonic solar cells

**Name of the conference:** 7th EuCheMS Chemistry Congress

**Corresponding author:** No

**City of event:** Liverpool, Merseyside, United Kingdom

**Date of event:** 26/08/2018

**End date:** 30/09/2018

**Organising entity:** Royal Society of Chemistry

Artem Babaryk; Olena Khaynakova; Patricia Horcajada.

- 3** **Title of the work:** High resolution X-ray powder diffraction study of Na8Ta21.64V2.36O64: solid state transformation of natrotantite to tetragonal tungsten bronze

**Name of the conference:** 2nd European Crystallography School

**Type of participation:** 'Participatory - poster



**Corresponding author:** Yes

**City of event:** Mieres, Principality of Asturias, Spain

**Date of event:** 02/09/2015

**End date:** 05/09/2015

**Organising entity:** European Crystallographic Association

**Type of entity:** Foundation

**City organizing entity:** Oviedo, Principality of Asturias, Spain

Artem Babaryk; Ievgene Odinets; Sergei Khainakov; Santiago Garcia-Granda; Nikolay Slobodyanik. pp. 281-282.

- 4** **Title of the work:** Solution of the crystal structure of the  $K_6.4Nb_{28.2}Ta_{8.1}O_{94}$  ("K<sub>2</sub>Nb<sub>8</sub>O<sub>21</sub>") pseudo-tetragonal tungsten bronze superstructure, using advanced transmission electron microscopy  
**Name of the conference:** IAMNano 2015-International Workshop on Advanced and In-situ Microscopies of Functional Nanomaterials and Devices  
**Type of participation:** Participatory - others  
**Corresponding author:** No  
**City of event:** Hamburg, Hamburg, Germany  
**Date of event:** 09/07/2015  
**End date:** 10/07/2015  
**Organising entity:** HZG Geesthacht  
**Type of entity:** Innovation and Technology Centres  
**City organizing entity:** Hamburg, Hamburg, Germany  
Robert Paria Sena; Artem Babaryk; Sergei Khainakov; Satiago Garcia-Granda; Nikolay Slobodyanik; Gustaaf Van Tendeloo; Artem Abakumov; Joke Hadermann. pp. 50 - 51.
- 5** **Title of the work:** Role of phosphate tetrahedral in the structure expansion complex oxides of titanium and tantalum in the flux medium  
**Name of the conference:** International Conference "Crystal Materials'2010" (ICCM'2010)  
**Type of event:** Conference  
**Geographical area:** Non EU International  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Kharkiv, Spain  
**Date of event:** 01/06/2010  
**End date:** 03/06/2010  
**Organising entity:** State Scientific Institution "Institute for Single Crystals" of National Academy of Sciences of Ukraine  
**Type of entity:** Innovation and Technology Centres  
**City organizing entity:** Kharkiv, Ukraine  
Artem Babaryk; Eugene Odinets; Vyacheslav Baumer; Nikolay Slobodyanik; Oleg Shishkin. pp. 58 - 58.
- 6** **Title of the work:** Melted phosphate-molybdate media for complex oxides synthesis  
**Name of the conference:** International Conference "Crystal Materials'2010" (ICCM'2010)  
**Type of participation:** Participatory - others  
**City of event:** Kharkiv, Ukraine  
**Date of event:** 01/06/2010  
**End date:** 03/06/2010  
**Organising entity:** State Scientific Institution "Institute for Single Crystals" of National Academy of Sciences of Ukraine  
**Type of entity:** Innovation and Technology Centres  
**City organizing entity:** Kharkiv, Ukraine  
Nikolay Slobodyanik; Igor Zatovsky; Artem Babaryk; Kateryna Terebilenko. pp. 58 - 58.



- 7** **Title of the work:** Conductive properties of aliovalent-substituted KTP-analogues  $KMn_{1-x}Co_xNbO_4$  (MII – Mn, Co, Ni)  
**Name of the conference:** International Scientific Workshop Oxide Materials for Electronic Engineering – fabrication, properties and application OMEE-2009  
**Type of event:** Workshop **Geographical area:** Non EU International  
**Type of participation:** 'Participatory - poster  
**Corresponding author:** No  
**City of event:** Lviv, Ukraine  
**Date of event:** 25/06/2009  
**End date:** 26/06/2009  
**Organising entity:** Lviv Polytechnic National University **Type of entity:** University  
**City organizing entity:** Lviv, Ukraine  
**Publication in conference proceedings:** Yes  
Artem Babaryk; Igor Zatovsky; Roman Kuzmin; Nikolay Slobodyanik; Vyacheslav Baumer. pp. 21 - 21.
- 8** **Title of the work:** Synthesis and phase formation in the flux system  $K_2O-P_2O_5-Nb_2O_5-MoO_3$   
**Name of the conference:** International Scientific Workshop Oxide Materials for Electronic Engineering – fabrication, properties and application OMEE-2009  
**Type of event:** Workshop **Geographical area:** Non EU International  
**Type of participation:** 'Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Lviv, Ukraine  
**Date of event:** 23/06/2009  
**End date:** 26/06/2009  
**Organising entity:** Lviv Polytechnic National University **Type of entity:** University  
**City organizing entity:** Lviv, Ukraine  
**Publication in conference proceedings:** Yes  
Eugene Odinets; Artem Babaryk; Nikolay Slobodyanik; Vyacheslav Baumer. pp. 51 - 51. (Ukraine):
- 9** **Title of the work:** Synthesis and investigation of potassium-niobium phosphates in complex systems  $K_2O-Nb_2O_5-P_2O_5-MoO_3$  and  $K_2O-Nb_2O_5-P_2O_5-MoO_3-MnO$  (MII – Cu, Zn, Cd)  
**Name of the conference:** Vth scientific international conference in chemistry "Kiev-Toulouse"  
**Type of event:** Conference **Geographical area:** Non EU International  
**Type of participation:** Participatory - others  
**Corresponding author:** Yes  
**City of event:** Ukraine, Ukraine  
**Date of event:** 02/06/2009  
**End date:** 04/06/2009  
**Organising entity:** Taras Shevchenko National University of Kyiv **Type of entity:** University  
**City organizing entity:** Kyiv, Ukraine  
**Publication in conference proceedings:** Yes  
Artem Babaryk; Eugen Odinets; Igor Zatovsky; Nikolay Slobodyanik. pp. 60 - 60. (Ukraine):
- 10** **Title of the work:** Applying of multicomponent high temperature media for complex phosphate preparation  
**Name of the conference:** Vth scientific international conference in chemistry "Kiev-Toulouse"  
**Type of event:** Conference **Geographical area:** Non EU International  
**Type of participation:** Participatory - others  
**Corresponding author:** No  
**City of event:** Kyiv, Ukraine





**Date of event:** 31/05/2009

**End date:** 04/06/2009

**Organising entity:** Taras Schevchenko National University of Kyiv

**City organizing entity:** Kyiv, Ukraine

**Publication in conference proceedings:** Yes

Nikolay Slobodyanik; Igor Zatovsky; Artem Babaryk; Kateryna Terebilenko. pp. 16 - 16. (Ukraine):

## R&D management and participation in scientific committees

### Scientific, technical and/or assessment committees

**Committee title:** Young Scientist Council

**Geographical area:** Non EU International

**City:** Kyiv, Ukraine

**Affiliation entity:** Taras Shevchenko National University of Kyiv

**Type of entity:** University

**City affiliation entity:** Kyiv, Ukraine

**Start-End date:** 17/02/2014 - 06/03/2017

## Other achievements

### Stays in public or private R&D centres

- 1 Entity:** University of Wroclaw **Type of entity:** University  
**Faculty, institute or centre:** Faculty of Chemistry  
**City of entity:** Wroclaw, Dolnoslaskie, Poland  
**Start-End date:** 10/10/2014 - 31/10/2014  
**Funding entity:** European Commission **Type of entity:** Foundation  
**Name of programme:** FP7-PEOPLE-2011-IRSES - Marie Curie Action "International Research Staff Exchange Scheme  
**Goals of the stay:** Guest  
**Provable tasks:** crystallographic studies of metal complexes with pro-drug chelating ligands
- 2 Entity:** University of Aveiro **Type of entity:** University Research Institute  
**Faculty, institute or centre:** CICECO  
**City of entity:** Aveiro, Portugal  
**Primary (UNESCO code):** 230691 - Organic chemistry. Instrumental Analysis  
**Start-End date:** 11/03/2013 - 04/08/2013  
**Funding entity:** Fundação para a Ciência e a Tecnologia  
**City funding entity:** Portugal  
**Name of programme:** PTDC/QUI-QUI/10998/2008  
**Goals of the stay:** Contracted  
**Acquired skills developed:** Analysis of precise spatial atomic structure by combination of diffraction, spectroscopic and theoretical methods
- 3 Entity:** Max Planck Institute for Chemical Physics of Solids **Type of entity:** Foundation  
**City of entity:** Dresden, Dresden, Germany



**Start-End date:** 12/06/2010 - 12/2009

**Funding entity:** Max Planck Society

**Name of programme:** Fellowship of Max Planck Society

**Goals of the stay:** Guest

**Provable tasks:** Synthesis and characterization of new borophosphate materials

**Acquired skills developed:** high-resolution powder diffraction, thermal analysis of polyoxoanionic compounds