Curriculum vitae with track record

First name, Surname: Olena, Zavorotynska
Date of birth: *05.09.1983*
Sex: F
Nationality: Ukrainian
ORCID ID: https://orcid.org/0000-0002-8101-1486
URL: http://www.researcherid.com/rid/O-9975-2015 (Web of Science)

Education

Year	Faculty/department - University/institution - Country
2021-2022	SQP // Course for PhD supervisors (50 h), UiS
2020-2021	UniPED // University pedagogics for new teachers (150 h) // University of Stavanger
2010 *(13.01)*	PhD thesis: "Modification of Materials' Surfaces for Hydrogen Storage" Department of Physical, Inorganic, and Chemistry of Materials, University of Turin, Italy, Supervisor prof. G. Spoto
2006	MSc in Physics Faculty of Natural Sciences/Department of Physics, National University of Kyiv-Mohyla Academy, Ukraine

Positions - current and previous

Year	Job title – Employer - Country
2022 - …	Visiting Associate prof. Tohoku University (S. Orimo group), 5% position
2018 - current	Associate professor in Materials Physics Department of Mathematics and Physics / University of Stavanger / Norway
2016-2012	Post-Doctoral Research Fellow / Institute for Energy Technology (IFE) / Norway
2012-2010	Research assistant / University of Turin / Italy

Career breaks

Year	Reason
2018-2017	Maternity leave
2017-2016	Jobseeker

Project management experience

Year	Project owner - Project - Role - Funder
2022 - 2026	**UiS – HyTACK –** PI – DIKU, 3 mnl NOK, educational activities within hydrogen technology at MSc and PhD level, schools, networking, on-line module on hydrogen technology Partners: University of South-Eastern Norway Savitribai Phule Pune university, India Tohoku University, Japan, Shibaura Institute of Technology, Japan Institute for energy Technology, Norway Norwegian research center NORCE, Norway Indian institute of scientific education and research, India
2022 - 2024	**UiS - H2@UiS** (interdepartmental group at UiS uniting research within hydrogen technology) **–** Head – internal UiS funding – 300 kNOK / Year
2021-2025	**UiS – Akademia avtale,** funding for 1 PhD student
2022 - …	**UiS – PHUN** – Partner

2021 - 2024	**UiS – MOFSORBMET** – Partner, WP leader – Nano 2021 funded by RCN (*Academic sector*)
2020 - 2023	**Institute for Energy Technology – COOL LONGBOAT** – Partner, WP leader – INTPART program funded by RCN (*Academic sector/research institutes*) – ca. 800 kNOK (UiS budget)
2018 - ongoing	Acquisition of scientific instrumentation and setting-up the UiS Materials Physics research lab - Managing most of the process starting from the objectives definition to installation follow-up / (*Academic sector*) - internal UiS funding

Supervision of students

Master's students	Ph.D. students	University/institution - Country
4.5	2	UiS - Norway

Other relevant professional experiences

Year	Description - Role
2022 -	HySchool – Head of the board
2021	Proposal reviewer for Swiss National Science Foundation (SNFS) to SINERGIA funding instrument
2021 -	External evaluator in NcNeutron beamtime proposal round // Paul Scherrer Institute
2021	Organiser of the 1st Online school "Materials and processes for production of solar hydrogen" (spring 2021) in the project COOL LONGBOAT http://cool-longboat.net/2021-spring
2020 -	Guest Editor Special Issue in Energies "Metal Hydrides and Oxyhydrides for Energy-related Applications" https://www.mdpi.com/journal/energies/special_issues/metal_hydrides_oxyhydrides_energy_ applications
2018 -2022	Local Radiation Protection Coordinator / IMF-UiS
2020	PhD committee member and administrator (1 PhD student) / IMF-UiS
2020 - current	PhD and post-doc selection/hiring committee – head (2 PhD students, 1 postdoc) / IMF-UiS
2018 -	External censor MSc theses // NTNU, UiB, UiO / Norway
2018 - 2021	COST action MECHANOCHEMISTRY CA18112 – Substitute Member from Norway – European cooperation in Science and Technology (*Academic sector/research institutes/industrial sector/public sector/other*)

Track record

Summary

I have assembled a total number of 27 publications in peer-reviewed journals with total number of citations: 1165, without self-citation: 1118, *h*-index = 19 (Web of Science as of 01.04.2022). Most of the publications are related to hydrogen storage and application of metal hydrides. I have had 9 invited talks related to advanced characterisation and hydrogen storage materials in various national and international conferences and schools.

Most recent invited talks:

"*Science of hydrogen*", outreach talk in "Norwegian physics meeting 2021", June, University of Stavanger, Norway.

"Structural characterization of energy-related materials", 1st and 2nd Online schools "Materials and processes for production of solar hydrogen" (spring and winter 2021) in the project COOL LONGBOAT

Publication list:

1. Dahal, R.; Vitillo, J.G.; Åsland, A.C.; Frommen, C.; Deledda, S.; Zavorotynska, O*. X-ray and Synchrotron FTIR Studies of Partially Decomposed Magnesium Borohydride. *Energies* **2022**, *15*, 7998. https://doi.org/10.3390/en15217998
2. Zavorotynska, Olena*; Sørby, Magnus; Vitillo, Jenny; Deledda, Stefano; Frommen, Christoph; Hauback, Bjorn, **Experimental and computational characterization of phase transitions in CsB3H8**", a*ccepted* to *Physical Chemistry Chemical Physics*, **2021**, DOI: 10.1039/D1CP02189C.
3. El Kharbachi, A.; Zavorotynska, O.; Latroche, M.; Cuevas, F.; Yartys, V.; Fichtner, M., **Exploits, Advances and Challenges Benefiting Beyond Li-Ion Battery Technologies**. *Journal of Alloys and Compounds* **2020**, *817*.
4. Heere, M.; Zavorotynska, O.; Deledda, S.; Sorby, M. H.; Book, D.; Steriotis, T.; Hauback, B. C., Effect of Additives, Ball Milling and Isotopic Exchange in Porous Magnesium Borohydride. *Rsc Advances* **2018**, *8*, 27645-27653.
5. Zavorotynska, O.; El-Kharbachi, A.; Deledda, S.; Hauback, B. C., **Recent Progress in Magnesium Borohydride Mg(Bh4)(2): Fundamentals and Applications for Energy Storage**. *International Journal of Hydrogen Energy* **2016**, *41*, 14387-14403.
6. Zavorotynska, O.; Deledda, S.; Hauback, B. C., Kinetics Studies of the Reversible Partial Decomposition Reaction in Mg(Bh4)(2). *International Journal of Hydrogen Energy* **2016**, *41*, 9885-9892.
7. Zavorotynska, O.; Saldan, I.; Hino, S.; Humphries, T. D.; Deledda, S.; Hauback, B. C., Hydrogen Cycling in Gamma-Mg(Bh4)(2) with Cobalt-Based Additives. *Journal of Materials Chemistry A* **2015**, *3*, 6592-6602.
8. Zavorotynska, O.; Deledda, S.; Vitillo, J. G.; Saldan, I.; Guzik, M. N.; Baricco, M.; Walmsley, J. C.; Muller, J.; Hauback, B. C., Combined X-Ray and Raman Studies on the Effect of Cobalt Additives on the Decomposition of Magnesium Borohydride. *Energies* **2015**, *8*, 9173-9190.
9. Zavorotynska, O.; Deledda, S.; Li, G. Q.; Matsuo, M.; Orimo, S.; Hauback, B. C., Isotopic Exchange in Porous and Dense Magnesium Borohydride. *Angewandte Chemie-International Edition* **2015**, *54*, 10592-10595.
10. Saldan, I., et al., Hydrogen Storage Properties of Gamma-Mg(Bh4)(2) Modified by Moo3 and Tio2. *International Journal of Hydrogen Energy* **2015**, *40*, 12286-12293.
11. Saldan, I.; Hino, S.; Humphries, T. D.; Zavorotynska, O.; Chong, M.; Jensen, C. M.; Deledda, S.; Hauback, B. C., Structural Changes Observed During the Reversible Hydrogenation of Mg(Bh4)(2) with Ni-Based Additives. *Journal of Physical Chemistry C* **2014**, *118*, 23376-23384.
12. Sumida, K., et al., Impact of Metal and Anion Substitutions on the Hydrogen Storage Properties of M-Btt Metal-Organic Frameworks. *Journal of the American Chemical Society* **2013**, *135*, 1083-1091.
13. Saldan, I., et al., Hydrogen Sorption in the Lih-Lif-Mgb2 System. *Journal of Physical Chemistry C* **2013**, *117*, 17360-17366.
14. Rude, L. H., et al., Hydrogen-Fluorine Exchange in Nabh4-Nabf4. *Physical Chemistry Chemical Physics* **2013**, *15*, 18185-18194.
15. Chavan, S. M.; Zavorotynska, O.; Lamberti, C.; Bordiga, S., H-2 Interaction with Divalent Cations in Isostructural Mofs: A Key Study for Variable Temperature Infrared Spectroscopy. *Dalton Transactions* **2013**, *42*, 12586-12595.
16. Zavorotynska, O.; Corno, M.; Pinatel, E.; Rude, L. H.; Ugliengo, P.; Jensen, T. R.; Baricco, M., Theoretical and Experimental Study of Libh4-Licl Solid Solution. *Crystals* **2012**, *2*, 144-158.
17. Saldan, I.; Campesi, R.; Zavorotynska, O.; Spoto, G.; Baricco, M.; Arendarska, A.; Taube, K.; Dornheim, M., Enhanced Hydrogen Uptake/Release in 2lih-Mgb2 Composite with Titanium Additives. *International Journal of Hydrogen Energy* **2012**, *37*, 1604-1612
18. Hino, S.; Fonnelop, J. E.; Corno, M.; Zavorotynska, O.; Damin, A.; Richter, B.; Baricco, M.; Jensen, T. R.; Sorby, M. H.; Hauback, B. C., Halide Substitution in Magnesium Borohydride. *Journal of Physical Chemistry C* **2012**, *116*, 12482-12488.
19. Chavan, S., et al., H-2 Storage in Isostructural Uio-67 and Uio-66 Mofs. *Physical Chemistry Chemical Physics* **2012**, *14*, 1614-1626.

20. Zavorotynska, O.; Vitillo, J. G.; Spoto, G.; Zecchina, A., Role of Extraframework Metal Sites for Hydrogen Adsorption into the Pores of a Zeolite: Ft-Ir Study. *International Journal of Hydrogen Energy* **2011**, *36*, 7944-7950.
21. Zavorotynska, O.; Corno, M.; Damin, A.; Spoto, G.; Ugliengo, P.; Baricco, M., Vibrational Properties of Mbh4 and Mbf4 Crystals (M = Li, Na, K): A Combined Dft, Infrared, and Raman Study. *Journal of Physical Chemistry C* **2011**, *115*, 18890-18900.
22. Rude, L. H., et al., Bromide Substitution in Lithium Borohydride, Libh4-Libr. *International Journal of Hydrogen Energy* **2011**, *36*, 15664-15672.
23. Alcantara, K. S.; Boesenberg, U.; Zavorotynska, O.; von Colbe, J. B.; Taube, K.; Baricco, M.; Klassen, T.; Dornheim, M., Sorption and Desorption Properties of a Cah2/Mgb2/Caf2 Reactive Hydride Composite as Potential Hydrogen Storage Material. *Journal of Solid State Chemistry* **2011**, *184*, 3104-3109.
24. Groppo, E.; Liu, W.; Zavorotynska, O.; Agostini, G.; Spoto, G.; Bordiga, S.; Lamberti, C.; Zecchina, A., Subnanometric Pd Particles Stabilized inside Highly Cross-Linked Polymeric Supports. *Chemistry of Materials* **2010**, *22*, 2297-2308.
25. Gribov, E. N.; Zavorotynska, O.; Agostini, G.; Vitillo, J. G.; Ricchiardi, G.; Spoto, G.; Zecchina, A., Ftir Spectroscopy and Thermodynamics of Co and H-2 Adsorbed on Gamma-, Delta- and Alpha-Al2o3. *Physical Chemistry Chemical Physics* **2010**, *12*, 6474-6482.
26. Figueroa-Gerstenmaier, S.; Daniel, C.; Milano, G.; Vitillo, J. G.; Zavorotynska, O.; Spoto, G.; Guerra, G., Hydrogen Adsorption by Delta and Epsilon Crystalline Phases of Syndiotactic Polystyrene Aerogels. *Macromolecules* **2010**, *43*, 8594-8601.
27. Figueroa-Gerstenmaier, S.; Daniel, C.; Milano, G.; Guerra, G.; Zavorotynska, O.; Vitillo, J. G.; Zecchina, A.; Spoto, G., Storage of Hydrogen as a Guest of a Nanoporous Polymeric Crystalline Phase. *Physical Chemistry Chemical Physics* **2010**, *12*, 5369-5374.
28. Groppo, E.; Uddin, M. J.; Zavorotynska, O.; Damin, A.; Vitillo, J. G.; Spoto, G.; Zecchina, A., Exploring the Chemistry of Electron-Accepting Molecules in the Cavities of the Basic Microporous P4vp Polymer by in Situ Ftir Spectroscopy. *Journal of Physical Chemistry C* **2008**, *112*, 19493-19500.