

# Volodymyr SHATOKHA

## Curriculum Vitae



### 1. PERSONAL DATA

First name: Volodymyr; Surname: Shatokha  
Year of birth: 1960  
Place of birth: Krivyi Rih, Ukraine  
Office address: Gagarin av.4, Dnipro – 49005, Ukraine  
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E-mail addresses: [shatokha@metal.nmetau.edu.ua](mailto:shatokha@metal.nmetau.edu.ua); [shatokha@gmail.com](mailto:shatokha@gmail.com)  
Scopus: <https://www.scopus.com/authid/detail.uri?authorId=55941002700>  
ORCID: <http://orcid.org/0000-0001-6024-0557>

### 2. EMPLOYMENT

#### Present employment

Institution: **Ukrainian State University of Science and Technology (former NMetAU)**  
Position: Professor, Ironmaking & Steelmaking Chair

#### Visiting fellowships:

- 01/11/2012-28/02/2013 – visiting professor, **The University of Tokyo (Japan)**, Graduate School of Frontier Sciences, Department of Advanced Materials Science
- 01/08/2015-31/08/2015 - research fellow, **Polytechnic University of Valencia (Spain)** under FP7 Marie Curie mobility grant
- 2017, 2018, 2019, 2021 – short-term visiting professorships, **Technical University Bergakademie Freiberg (Germany)** under Erasmus+ KA1 academic mobility scheme

#### Previous periods of employments (National Metallurgical Academy of Ukraine, NMetAU)

- 2001 - 2021: Vice-Rector for Research and Education
- 1999 - 2001: Dean of the Metallurgical Faculty
- 1999 – onwards: Professor with the Ironmaking & Steelmaking Chair
- 1993 - 1999: Docent with the Metallurgical Faculty
- 1985 - 1992: Junior, then Senior Researcher with the Ironmaking Chair

#### Languages:

##### **Ukrainian and Russian - Mother tongues**

Foreign languages:	Writing	Reading	Speaking
<b>English:</b>	<b>Excellent</b>	<b>Excellent</b>	<b>Fluent</b>
French:	Fair	Good	Fair

### 3. DEGREES and EDUCATION

#### Academic Titles:

- 2002 – Professor
- 2001 - Docent
- 1992 – Senior Researcher

#### Scientific Degrees:

- 1999 - Doctor of Science (postdoctoral degree)
- 1985 – Candidate of Science (equivalent to PhD)

#### Higher education degree:

- 1982 – Engineer. Degree programme – Ferrous Metallurgy (study in Dnipropetrovsk Metallurgical Institute from September 1977 to June 1982)

### 4. RESEARCH INTERESTS

- Low carbon metallurgy, Innovative recovery and recycling of industrial wastes, Thermodynamics and kinetics of metallurgical processes, Ironmaking, Iron ore sintering, Coal gasification, Environmental protection in iron and steel industry, Sustainability analysis, Sustainable development and climate change mitigation scenarios for iron & steel sector

## 5. PEER REVIEW AND EVALUATION

### Expert/ evaluator/ rapporteur

#### United Nations Organization

- Reviewer of CDM Methodologies for UNFCCC (2009, 2011)

#### European Commission

- Assignments with the Horizon 2020 (2015, 2016, 2017, 2020, 2021)
- Assignments with the FP7 (2009, 2012, 2013)

#### German Aerospace Center (DLR)

- Evaluation of proposals. Thematic Focus: Renewable Energy (2015)

### International examiner/opponent for PhD theses

- University of New South Wales, Sydney, Australia in 2015 and 2010;
- Norwegian University of Science and Technology in 2013;
- Royal Institute of Technology, Stockholm, Sweden in 2009.

### Peer review <https://publons.com/researcher/2298334/volodymyr-i-shatokha/peer-review/>

- Metallurgical and Materials Transactions B; Metals; International Journal of Minerals, Mineral Processing and Extractive Metallurgy; Thermochemica Acta; Powder Technology; Journal of Cleaner Production; Resources, Conservation and Recycling and other

### Book Editor

- Iron Ores: Ed. Volodymyr Shatokha. London: IntechOpen, 2021, (DOI: 10.5772/intechopen.87814, ISBN: 978-1-83962-551-0)
- Iron Ores and Iron Oxide Materials: Ed. Volodymyr Shatokha. London: IntechOpen, 2018, 269 p (DOI: 10.5772/intechopen.69715, ISBN: 978-1-78923-321-6)
- Sintering - Methods and Products: Ed. Volodymyr Shatokha. InTech, 2012, 316 p (DOI: 10.5772/1305 ISBN: 978-953-51-0371-4)

### Member of Advisory/Editorial Board

- Theory and Practice of Metallurgy (Ukraine)
- Metallurgical and Mining Industry (Ukraine)
- Iron and Steel Institute of Japan International Journal (ISIJ International) in 2009-2012

## 6. ESSENTIAL EU-FUNDED INTERNATIONAL PROJECTS (LAST 5 YEARS)

- Boosting the role of HEIs in the industrial transformation towards the Industry 4.0 paradigm in Georgia and Ukraine, Erasmus+; 609939-EPP-1-2019-1-BE-EPPKA2-CBHE-JP, 2020-2023 <https://hein4.net> - co-coordinator
- European Union Leadership in Climate Change Mitigation, Erasmus+; 564689-EPP-1-2015-1-UAEPJMO- MODULE, 2015-2018. <http://euclim.com> – module leader;
- Higher engineering training for environmentally sustainable industrial development; 543966-TEMPUS-1-2013-1-BE-TEMPUS-JPCR, 2013-2016 (<http://hetes.com.ua>) - co-coordinator
- Customised Advisory Services for Energy-efficient Manufacturing Systems (CASES) - under FP7 Marie Curie International Research Staff Exchange Scheme. Contract No. 294931, 2012-2016 - coordinator for Ukraine

## 7. RECOGNITION OF ACHIEVEMENTS

- 2011 - Laureate of the State Prize of Ukraine in Science and Technology
- 2014 - "Excellence in education" award by Ministry of Education and Science of Ukraine
- 2004 – Honorary Professor with the Inner Mongolia University of Science and Technology (Baotou, China)

### Member of the steering or organising committees for international conferences (last 5 years)

- Vienna, Austria - 2022: Europ Direct Reduced Iron & Alternative Ironmak Conf (Ironmasters 2022)
- Seoul, South Korea - 2021: 11<sup>th</sup> Intl. Conf. On Molten Slags, Fluxes & Salts (MOLTEN 2020)
- Rourkela, India - 2019: 2<sup>nd</sup> Intl Conf on Processing & Characterization of Materials (ICPCM-2019)
- Lviv, Ukraine – 2018: Intl. Conf. Advances in Metallurgical Proc & Materials (AdMet 2018)
- Seattle, USA – 2016: 10<sup>th</sup> Intl. Conf. On Molten Slags, Fluxes and Salts (MOLTEN 2016)
- Sofia, Bulgaria – 2016: International Conference on Metallurgy and Materials (ICMM'16)
- Kyiv, Ukraine – 2015: Intl. Conf. Advances in Metallurgical Proc & Materials (AdMet 2015)

## ESSENTIAL PUBLICATIONS

### Most essential publications in international peer-reviewed journals and monographs (last10 years):

1. Shatokha, V. Slag parameters and sulphur partition in blast furnace hearth: Ukrainian case and international comparison (2021) *Ironmaking and Steelmaking*  
<https://doi.org/10.1080/03019233.2021.1966265>
2. Shatokha V., Matukhno E. Climate change mitigation scenarios for the Ukrainian steel sector based on best available technologies deployment: *Procedia Environmental Science, Engineering and Management* 8 (2021) (2) 507-517
3. Stupnik M, Shatokha V. History and Current State of Mining in the Kryvyi Rih Iron Ore Deposit. In *Iron Ores* (Edited by V. Shatokha) London: IntechOpen, 2021, DOI: 10.5772/intechopen.96120
4. Shatokha V. et al. Potential Means to Reduce CO<sub>2</sub> Emissions of Iron and Steel Industry in Ukraine Using Best Available Technologies: *Journal of Sustainable Metallurgy* (2020) 6:451–462  
<https://doi.org/10.1007/s40831-020-00289-0>
5. Shatokha V. Ukraine's commitments under Association Agreement: Challenges and opportunities for the steel industry: *Materiaux et Techniques* (2019) 107 (1), Article number 2018044; DOI: 10.1051/mattech/2018044
6. Matukhno E, Belokon K, Shatokha V, Baranova T. Ecological aspects of sustainable development of metallurgical complex in Ukraine: *Procedia Environmental Science, Engineering and Management* 6 (2019) (4) 671-679
7. Shatokha V. Chasing shadows: Technology and socioeconomic barriers versus climate targets for iron and steel industry: *Archives of Materials Science and Engineering*. 2018, 92 (1), pp. 33-40; DOI: 10.5604/01.3001.0012.5510
8. Shatokha V. Comparative Study of Iron and Steel Industry Transition in the Countries of Central-East Europe and Former Soviet Union: *European Journal of Sustainable Development*, 2017, 6 (4), pp. 155-168. Doi: 10.14207/ejsd.2017.v6n4p155
9. Shatokha V. Post-Soviet issues and sustainability of iron and steel industry in Eastern Europe: *Mineral Processing and Extractive Metallurgy (Trans. Inst. Min. Metall. C)*. 2017, 126 (1-2) pp.62-69 <http://dx.doi.org/10.1080/03719553.2016.1251750>
10. Shatokha V. Potential of Best Available and Radically New Technologies for Cutting Carbon Dioxide Emissions in Ironmaking: *Ironmaking and Steelmaking Processes*, Ed. P. Cavaliero. 2016 Springer International Publishing, pp. 411-426 DOI 10.1007/978-3-319-39529-6\_24
11. Shatokha V. Environmental Sustainability of the Iron and Steel Industry: Towards Reaching the Climate Goals: *European Journal of Sustainable Development*, 2016, 5 (4), pp. 289-300
12. Shatokha V., Sokur I. Study on Water Splitting Potential of Some Metallurgical Wastes for Production of Hydrogen: *Journal of Sustainable Metallurgy*. 2016 (2), pp. 116-122. DOI: 10.1007/s40831-015-0038-0
13. Shatokha V. The Sustainability of the Iron and Steel Industries in Ukraine: Challenges and Opportunities: *Journal of Sustainable Metallurgy*. 2016 (2), pp. 106-115. DOI: 10.1007/s40831-015-0036-2.
14. Shatokha V. I., Sokolovskaya I. V. Effect of coal treatment with molten blast furnace slag on char properties: *Ironmaking and Steelmaking*. 2013 (40) pp. 635-637, DOI: 10.1179/1743281212Y.0000000080
15. Shatokha V., Semykina A., Nakano J., Sridhar S., Seetharaman S. A study on transformation of some transition metal oxides in molten steelmaking slag to magnetically susceptible compounds: *J. Min. Metall. Sect. B-Metall.* 49 (2) B (2013) pp. 169-174, DOI: 10.2298/JMMB120811008S
16. Semykina A., Dzhebian I, Shatokha V. On the Formation of Vanadium Ferrites in CaO–SiO<sub>2</sub>–FeO–V<sub>2</sub>O<sub>5</sub> Slags: *Steel Research Intl.* 2012 (83) pp. 1129–1134, DOI: 10.1002/srin.201200134
17. Shatokha V. and Velychko O. Study of softening and melting behaviour of iron ore sinter and pellets: *High Temperature Materials and Processes*. 2012 (31), pp..215-220, DOI: 10.1515/htmp-2012-0027

18. Shatokha V. I., Sokolovskaya I. V. Study on effect of coal treatment with blast furnace slag on char reactivity in air: *Ironmaking and Steelmaking*. 2012 (39), pp.439-445, DOI: 10.1179/1743281211Y.0000000091
19. Semykina A., Nakano J., Sridhar S., Shatokha V., Seetharaman S. Confocal Scanning Laser Microscopy studies of crystal growth during oxidation of a liquid FeO-CaO-SiO<sub>2</sub> slag: *Metallurgical and Materials Transactions B*. 2011 (42), pp. 471-476, DOI: 10.1007/s11663-011-9505-6
20. Semykina A., Gorobets O., Shatokha V., Seetharaman S. Cold Simulation of Particle Movement in a Conducting Liquid under Crossed Electric and Magnetic Fields. Magnetite Particles Separation from Molten Slags: *Steel Research Intl*. 2011 (82) pp. 362–368, DOI: 10.1002/srin.201000159
21. Shatokha V., Gogenko O., Kripak S. Utilising of the oiled rolling mills scale in iron ore sintering process: *Resources, Conservation and Recycling*. 2011 (55) pp.435–440, DOI: 10.1016/j.resconrec.2010.11.006
22. Semykina A., Shatokha V., Iwase M., Seetharaman S. Kinetics of oxidation of divalent iron to trivalent state in liquid FeO-CaO-SiO<sub>2</sub> slags: *Metallurgical and Materials Transactions B*. 2010 (41) pp. 1230-1239
23. Semykina A., Shatokha V., Seetharaman S. Innovative approach to recovery of iron from steelmaking slags: *Ironmaking and Steelmaking* 2010 (37) pp.536-540
24. Semykina A., Nakano J., Sridhar S., Shatokha V., Seetharaman S. Confocal Microscopic Studies on Evolution of Crystals During Oxidation of the FeO-CaO-SiO<sub>2</sub>-MnO Slags: *Metallurgical and Materials Transactions B*. 2010 (41) pp.940-945
25. Shatokha V., Korobeynikov I., Maire E., Gremillard L, Adrien J. Iron ore sinter porosity characterisation with application of 3D X-ray tomography: *Ironmaking and Steelmaking*. 2010 (37) pp.313-319

**Presentations at the international peer-reviewed conferences (last 5 years):**

1. Shatokha V. et al. Climate change mitigation scenarios for the Ukrainian steel sector based on best available technologies deployment: *Environmental Innovations – 2<sup>nd</sup> Online Conference*, 19-23 October 2020
2. Shatokha V. Steel Industry in Former Soviet Union countries: transition patterns and new opportunities in context of the Belt and Road Initiative: *2<sup>nd</sup> Think Tank Forum of the International Scientists Union for the Belt and Road*, 5-6 November 2019, Beijing, China
3. Shatokha V. Opportunities of reaching the 1.5°C climate target in the iron and steel sector: *Metallurgy Innovation Symposium, MIS-2019*, 22-25 September 2019, Wuhan, China
4. Shatokha V. History and development of coastal steelworks in Mariupol, Ukraine: *Küstenhüttenwerke - Aspekte ihrer Entwicklung*, 10-12 April 2019, IJmuiden, The Netherlands
5. Shatokha V. Ukraine's Commitments under Association Agreement: Challenges and Opportunities for Steel Industry: *12<sup>th</sup> Society and Materials International Conference, SAM 12*, 22-23 May 2018, Metz, France.
6. Shatokha V. Comparative Study of Iron and Steel Industry Transition in the Countries of Central-East Europe and Former Soviet Union: *Proceedings of the 5<sup>th</sup> International Conference On Sustainable Development: 5<sup>th</sup> ICSD*. 7-8 September 2017, Rome, Italy
7. Shatokha V. Environmental Sustainability of the Iron and Steel Industry: Towards Reaching the Climate Goals: *Proceedings of the 4<sup>th</sup> International Conference On Sustainable Development: 4<sup>th</sup> ICSD*. 16-17 September 2016, Rome, Italy

**Essential Patents:**

1. A. Nakano, S. Seetharaman, V. Shatokha: Production of nano sized ferrite comprising oxidizing a molten slag. US Patent 9404167. Published Aug.2, 2016
2. A. Nakano, S. Seetharaman, V. Shatokha: Production of nano sized ferrite. US Patent 20150307957, C01G49/00, C22B7/04. Published Oct.29, 2015
3. A. Semykina, S. Seetharaman, V. Shatokha, O. Gorobets: Production of nano sized ferrite. Patent WO2012033454, C22B 7/04 (2006.01); International Application No.: PCT/SE2011/051078; Publication Date: 15.03.2012; International Filing Date 07.09.2011
4. Shatokha V. Continuous method for production of hydrogen № 95181. C01B 3/02. 11.07.2011 (Ukraine)