

**IDENTIFYING INFORMATION:**

NAME: Tsyusko, Olga

ORCID iD: <https://orcid.org/0000-0001-8196-1062>

POSITION TITLE: Associate Professor

PRIMARY ORGANIZATION AND LOCATION: University of Kentucky, Lexington, KY, US

**Professional Preparation:**

ORGANIZATION AND LOCATION	DEGREE (if applicable)	RECEIPT DATE	FIELD OF STUDY
Uzhgorod National University, Uzhgorod, Not Applicable, N/A, UA	B.S.	05/1995	Biology
University of Georgia, Athens, GA, United States	PHD	12/2004	Toxicology

**Appointments and Positions**

- 2019 - present Associate Professor, University of Kentucky, Department of Plant and Soil Sciences, Lexington, KY, US
- 2018 - 2019 Associate Research Professor, University of Kentucky, Department of Plant and Soil Sciences, Lexington, KY, US
- 2011 - 2018 Assistant Research Professor, University of Kentucky, Department of Plant and Soil Sciences, Lexington, KY, US
- 2008 - 2011 Scientist I, University of Kentucky, Department of Plant and Soil Sciences, Lexington, KY, US
- 2006 - 2008 Molecular Biologist, Savannah River Ecology Laboratory, University of Georgia, Augusta, SC, US
- 2004 - 2006 Postdoctoral Fellow, University of Georgia, Savannah River Ecology Laboratory (SREL), Athens, GA, US

**Products****Products Most Closely Related to the Proposed Project**

1. Padhye L, Jasemizad T, Bolan S, Tsyusko O, Unrine J, Biswal B, Balasubramanian R, Zhang Y, Zhang T, Zhao J, Li Y, Rinklebe J, Wang H, Siddique K, Bolan N. Silver contamination and its toxicity and risk management in terrestrial and aquatic ecosystems. *Science of The Total Environment*. 2023 May; 871:161926-. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0048969723005417> DOI: 10.1016/j.scitotenv.2023.161926
2. McCourt K, Cochran J, Abdelbasir S, Carraway E, Tzeng T, Tsyusko O, Vanegas D. Potential Environmental and Health Implications from the Scaled-Up Production and Disposal of Nanomaterials Used in Biosensors. *Biosensors*. 2022 November 25; 12(12):1082-. Available from: <https://www.mdpi.com/2079-6374/12/12/1082> DOI: 10.3390/bios12121082
3. Eke J, Banks L, Mottaleb M, Morris A, Tsyusko O, Escobar I. Dual-Functional Phosphorene Nanocomposite Membranes for the Treatment of Perfluorinated Water: An Investigation of Perfluorooctanoic Acid Removal via Filtration Combined with Ultraviolet Irradiation or Oxygenation. *Membranes*. 2020 December 25; 11(1):18-. Available from:

<https://www.mdpi.com/2077-0375/11/1/18> DOI: 10.3390/membranes11010018

4. Eke J, Mills PA, Page JR, Wright GP, Tsyusko OV, Escobar IC. Nanohybrid Membrane Synthesis with Phosphorene Nanoparticles: A Study of the Addition, Stability and Toxicity. *Polymers* (Basel). 2020 Jul 14;12(7) PubMed Central PMCID: [PMC7408299](https://pubmed.ncbi.nlm.nih.gov/348299/).
5. Cochran J, Unrine J, Coyne M, Tsyusko O. Multiple stressor effects on a model soil nematode, *Caenorhabditis elegans*: Combined effects of the pathogen *Klebsiella pneumoniae* and zinc oxide nanoparticles. *Science of The Total Environment*. 2023 March; 865:161307-. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S004896972208411X> DOI: 10.1016/j.scitotenv.2022.161307

#### Other Significant Products, Whether or Not Related to the Proposed Project

1. Chen C, Tsyusko OV, McNear DH Jr, Judy J, Lewis RW, Unrine JM. Effects of biosolids from a wastewater treatment plant receiving manufactured nanomaterials on *Medicago truncatula* and associated soil microbial communities at low nanomaterial concentrations. *Sci Total Environ*. 2017 Dec 31;609:799-806. PubMed PMID: [28768212](https://pubmed.ncbi.nlm.nih.gov/28768212/).
2. Wamucho A, Heffley A, Tsyusko O. Epigenetic effects induced by silver nanoparticles in *Caenorhabditis elegans* after multigenerational exposure. *Science of The Total Environment*. 2020 July; 725:138523-. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0048969720320362> DOI: 10.1016/j.scitotenv.2020.138523
3. Starnes D, Unrine J, Chen C, Lichtenberg S, Starnes C, Svendsen C, Kille P, Morgan J, Baddar ZE, Spear A, Bertsch P, Chen KC, Tsyusko O. Toxicogenomic responses of *Caenorhabditis elegans* to pristine and transformed zinc oxide nanoparticles. *Environ Pollut*. 2019 Apr;247:917-926. PubMed PMID: [30823346](https://pubmed.ncbi.nlm.nih.gov/30823346/).
4. Choi J, Tsyusko O, Unrine J, Chatterjee N, Ahn J, Yang X, Thornton B, Ryde I, Starnes D, Meyer J. A micro-sized model for the in vivo study of nanoparticle toxicity: what has *Caenorhabditis elegans* taught us?. *Environmental Chemistry*. 2014; 11(3):227-. Available from: <http://www.publish.csiro.au/?paper=EN13187> DOI: 10.1071/EN13187
5. Wamucho A, Unrine J, May J, Tsyusko O. Global DNA Adenine Methylation in *Caenorhabditis elegans* after Multigenerational Exposure to Silver Nanoparticles and Silver Nitrate. *International Journal of Molecular Sciences*. 2023 March 24; 24(7):6168-. Available from: <https://www.mdpi.com/1422-0067/24/7/6168> DOI: 10.3390/ijms24076168

#### Synergistic Activities

1. Executive Committee for USDA NIFA Multistate Project NC1194 Nanotechnology and Biosensors, Chair, May 2021 – 2022
2. NSF Review Panel CBET Program, 2021 and 2023
3. Steering Committee for undergraduate Agricultural and Medical Biotechnology Program at the College of Agriculture, Food and Environment, University of Kentucky, August 2020 - August 2023.
4. Nanotechnology Steering Committee, Nanotechnology IG Steering Committee, July 2019 - Present
5. US Chair for Ecotoxicity Communities of Research (Ecotox COR) in the US-EU Nano

Environmental Health Science CORs, February 2022 - Present

**Certification:**

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Tsyusko, Olga in SciENcv on 2024-03-25 12:26:02