*Biographical Sketch- Eugene Mamontov*

Address: Neutron Scattering Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831,

Tel: 865-771-1387; Email: mamontove@ornl.gov

Scientific Expertise

Neutron scattering.

Education and Training

Postdoctoral: University of Pennsylvania (2000-2003) (Material Science and Engineering).

Ph.D. Degree: Materials Science and Engineering, University of Pennsylvania (1999). Advisor: Prof. Takeshi Egami.

M.S. Degree: Solid State Physics, Moscow Engineering Physics Institute (1994).

**Research and Professional Experience**

2023-present: Chemical Spectroscopy Group Leader, ORNL

2006-2023 Instrument Scientist, ORNL.

2003-2006 : Instrument Scientist, NIST Center for Neutron Research and University of Maryland.

**Selected Recent Publications (out of ca. 300)**

1. “Exploring the limits of biological complexity amenable to studies by incoherent neutron spectroscopy”. E. Mamontov, *Life* **12**, 1219 (2022).
2. “A concept of a broadband inverted geometry spectrometer for the Second Target Station at the Spallation Neutron Source”. E. Mamontov, C. Boone, M. J. Frost, K. W. Herwig, T. Huegle, J. Y. Y. Lin, B. McCormick, W. McHargue, A. D. Stoica, P. Torres, and W. Turner, *Review of Scientific Instruments* **93**, 045101 (2022).
3. “Hydration-induced disorder lowers the energy barriers for methyl rotation in drug molecules”. E. Mamontov, Y. Cheng, L. L. Daemen, A. I. Kolesnikov, A. J. Ramirez-Cuesta, M. R. Ryder, and M. B. Stone, *Journal of Physical Chemistry Letters* **11**, 10256 (2020).
4. “Temperature dependence of nanoscale dynamic processes measured in living millipedes by high resolution inelastic and elastic neutron scattering”. E. Mamontov, N. C. Osti, and M. Tyagi, *Scientific Reports* **9**, 11646 (2019).
5. “Microscopic diffusion processes measured in living planarians”. E. Mamontov, *Scientific Reports* **8**, 4190 (2018).
6. “A neutron spectrometer concept implementing RENS for studies in life sciences”. S. Magazu and E. Mamontov, *Biochimica et Biophysica Acta* **1861**, 3632 (2017).
7. “A novel approach to neutron scattering instrumentation for probing multiscale dynamics in soft and biological matter”. E. Mamontov, *Journal of Physics: Condensed Matter* **28**, 345201 (2016).
8. “Effect of metal ion intercalation on the structure of MXene and water dynamics on its internal surfaces”. N. C. Osti, M. Naguib, A. Ostadhossein, Y. Xie, P. R. C. Kent, B. Dyatkin, G. Rother, W. T. Heller, A. C. T. van Duin, Y. Gogotsi, and E. Mamontov, *ACS Applied Materials and Interfaces* **8**, 8859 (2016).
9. “New opportunities for quasielastic and inelastic neutron scattering at steady-state sources using mechanical selection of the incident and final neutron energy”. E. Mamontov, *Journal of Neutron Research* **18**, 21 (2015).
10. “Wide-angle mechanical velocity selection for scattered neutrons in inelastic neutron spectrometers”. E. Mamontov, *Nuclear Instruments and Methods in Physics Research A* **759**, 83 (2014).