

Musaev, Djamaladdin (Jamal) G.

*Director, Cherry L. Emerson Center for Scientific Computation,
Adjunct Professor of Chemistry,
Emory University*



Professional Preparation:

Institution	Major/Area	Degree	Year
Azerbaijan State University, Azerbaijan	Quantum Physics	BS & MS	1978
USSR Academy of Sciences, Moscow, Russia	Quantum Chem	Ph.D.	1985
Institute for Molecular Sci., Okazaki, Japan	Quantum Chem	JSPS fellow	1991-93

Appointments: **1.** Director, Cherry L. Emerson Center, Emory University (2006-present); **2.** Adjunct Professor of Chemistry, Emory University (2015-present); **3.** Manager, Cherry L. Emerson Center, Emory University, (1993-2006); **6.** JSPS Research Associate, Institute for Molecular Science, Okazaki, Japan, (1991-1993); **4.** Senior Researcher, Inst. for New Chemical Problems, USSR Academy of Sciences, Chernogolovka, Moscow Region, Russia, (1981-1993); **5.** Visiting Scientist, Nesemyanov's Inst. of Organo-Element Compounds, USSR Academy of Science, Moscow, Russia, (1978-1981); **6.** Junior Scientist, Institute for Theoretical Problems of Chemical Processes, Azerbaijan Acad. of Science, Baku, Azerbaijan, (1978-1981).

RESEARCH INTERESTS:

1. Theoretical/Computational Studies of:

- Fundamental principles of transition metal-catalyzed nitrogen fixation, hydrocarbon oxidation, alkene/alkyne borylation, olefin polymerization;
- Solar-to-Chemical conversion, Water Oxidation Catalyst, Alternative energy;
- Stereoselective C-H bond functionalization (oxidation, amination, alkylation, etc.)
- Nano-scale materials with unusual physicochemical properties and reactivity.
- Mechanisms of enzymatic processes.

2. Development of Hybrid Computational Methods for interfacial charge transfer in complex systems.

HONORS/DISTINCTIONS

- Yusif Mammadaliyev Award (Azerbaijan) **2025**
- IV Humanitarian Form (***under aspiration of the United Nation***): “*Education and Science in the Context of Human Capital Development*”, **2018**, October, Baku, Azerbaijan
- Editorial Board Member, *Organometallics*, **(2015-2018)**
- Japan Society for Promotion of Science (JSPS) Senior Fellowship, **2013**
- Turkish Scientific and Technological Research Council fellow, **2011**
- Visiting Professor: Universitat de les Illes Balears, Palme de Mallorca, Spain, (Oct. **2007**)
- Visiting Professor: The University of Tokyo, Tokyo, Japan (**2002**)
- Japan Society for Promotion of Science (JSPS) Fellowship (**1991-1993**)

PUBLICATIONS:

440+ papers, two Books, and six book chapters:

H-Index:

81 [(Google Scholar)];

Total number of citations: 24500+;

PUBLICATION (see Publication List):

Lecture delivered: more than 330+ lectures were delivered at the Universities and R&D companies of USA, Japan, Canada, Russia, Germany, France, Spain, Italy, Sweden, Israel, China, Korea, Taiwan, Turkey, Azerbaijan,....

Synergistic Activities (*short list*):

- **Founding Member of the National Science Foundation (NSF, USA) funded “Center for Stereoselective C-H Functionalization”.** Center includes 14 top Universities of USA, 11 leading pharma Companies, 22 Principal Investigators and over 70 researchers. (see <http://www.nsf-cchf.com/>), Sept., 2012-2023
- **Founder of the Emerson Center Lectureship Award with annual Symposium (2003-current).** Award Winners are World’s leading scientists.
(see: <http://www.emerson.emory.edu/conferences/index.html>)
- **Guest Editor:** *The Journal of Computational Chemistry*, 2019, v 40, # 1 and 2
- **Guest Editor:** *Chemical Physics*, 2019.
- **Organizer of the International (NATO) Symposium** “From Simplicity to Complexity in Chemistry and Beyond: Interplay Theory and Experiment” (with Drs. C. Hill (USA), A. Muller (Germany), V. Farzaliyev (Azerbaijan)), May 26-29, 2008, Baku Azerbaijan.
- **Organizer of the Symposium** “Theory and Computation for Complex Molecular Systems” within Pacifichem-2021, December, 2021, Hawaii.
- **Member of International Advisory Board:** “International Conference on Noncovalent Interactions”, 2019- present