

DANUTA LESZCZYNSKA
Professor of Environmental Engineering and Science
Jackson State University, Email: danuta.leszczynska@jsums.edu,

(a) Professional Preparation

Technical University of Wroclaw, Wroclaw, Poland, Chemical Engineering	B.S.	1974
Technical University of Wroclaw, Wroclaw, Poland, Chemistry (Technology of Polymers)	M.S.	1974
Technical University of Wroclaw, Wroclaw, Poland, Environmental Engineering	Ph.D.	1978
University of Florida, Gainesville Fl., Environmental Science and Engineering		1987- 1990

(b) Appointments

Professor, Dept of Civil and Environmental Engineering, Jackson State University, Jackson, MS, 2006-present

Visiting Research Faculty, Lawrence Livermore National Laboratory, Livermore, CA, 2006-2008

Fulbright Fellow, 2004-2005

Associate Professor, Dept of Civil and Environmental Engineering, Florida State University, 1995-2006

Assistant Professor, Dept of Chemistry, Jackson State University, Jackson, Mississippi 1991- 1995

(c) Products

(i) Products most closely related to the project

- A. A. Toropov, A. P. Toropova, E. Benfenati, G. Gini, D. Leszczynska, J. Leszczynski, "[CORAL: QSPR model of water solubility based on local and global SMILES attributes](#)", *Chemosphere* 90, 877–880, **2013**
- A. A. Toropov, A. P. Toropova, E. Benfenati, G. Gini, T. Puzyn, D. Leszczynska, J. Leszczynski, "[Novel application of the CORAL software to model cytotoxicity of metal oxide nanoparticles to bacteria Escherichia coli](#)", *Chemosphere*, 89, 9, 1098- 1102, **2012**
- Toropova A.P, Toropov A.A., Benfenati E., Gini G. Leszczynska D., Leszczynski J., "The average numbers of outliers over groups of various splits into training and test sets: A criterion of the reliability of a QSPR? A case of water solubility", *Chemical Physics Letters*, 542, 23, 134-137, **2012**
- A. A Toropov, A. P Toropova, B. F Rasulev, E. Benfenati, G. Gini, D. Leszczynska, J. Leszczynski, "Coral: QSPR modeling of rate constants of reactions between organic aromatic pollutants and hydroxyl radical", *Journal of Computational Chemistry*; DOI:10.1002/jcc.23022, **2012**
- T. Puzyn, B. Rasulev, A. Gajewicz, X. Hu, T.P. Dasari, A. Michalkova, H.-H. Hwang, D. Leszczynska, J. Leszczynski, "Using nano-QSAR to predict the cytotoxicity of metal oxide nanoparticles" *Nature Nanotechnology*, ISSN: 1748-3387, 6, 3, 175-178, **2011**

(ii) Other significant products

- S. Saha, T. C. Dinadayalane, D. Leszczynska, J. Leszczynski, "DFT-based reactivity study of (5,5) armchair boron nitride nanotube (BNNT)", *Chemical Physics Letters* , 565, 69-73, April 4, **2013**
- A. Furmanchuk, O. Isayev, T. C. Dinadayalane, D. Leszczynska, J. Leszczynski, "OVERVIEW: Mechanical properties of silicon nanowires" *WIREs Comput Mol Sci*, 2: 817–828 **2012**
- Chapter in Book: B. Rasulev, D. Leszczynska, J. Leszczynski, Ch 3. "[Nanoparticles: Toward Predicting their Toxicity and Physico-Chemical Properties](#)", in book Advanced Methods and Applications in Chemoinformatics: Research Progress and new Applications, Edited by Eduardo A. Castro, A.K. Haghi, IGI Global **2012** DOI: 10.4018/978-1-60960-860-6.ch003
- S. Saha, T. C. Dinadayalane, J. S. Murray, D. Leszczynska, J. Leszczynski, Surface Reactivity for Chlorination on Chlorinated (5,5) Armchair SWCNT: A Computational Approach, *J. Phys. Chem. C*, 116 (42), pp 22399–22410, **2012**
- M. A. Turabekova, T. C. Dinadayalane, D. Leszczynska, J. Leszczynski "Comprehensive Study on the Dissociative Chemisorption of N_{H3} on the Sidewalls of Stone–Wales Defective Armchair (5,5) Single-Walled Carbon Nanotubes", *J. Phys. Chem. C*, 116 (10), pp 6012–6021, **2012**
- Gajewicz, B. Rasulev, T. C Dinadayalane, P. Urbaszek, T. Puzyn, D. Leszczynska, J. Leszczynski, "[Advancing risk assessment of engineered nanomaterials: Application of computational approaches](#)", *Advanced Drug Delivery Reviews*, 64 (15), 1663-1693**2012**

(d) Synergistic Activities

- Undergraduate Mentor of University-wide programs: NIH-RISE, NSF HBCU-UP, NSF LSMAMP
- Academic coordinator of National Postdoctoral Association (JSU chapter)
- Academic coordinator of Society of Women Engineers (student's JSU chapter)

- Member of Fulbright Specialist Peer Review Committee, 2008- 2011
- Guest Lecturer in Poland, Croatia and Kosova, as a part of Fulbright Fellowship (2005): training of distance-learning teaching, state-of art remediation technologies, and in-situ stormwater runoff treatment

(e) Collaborators & Other Affiliations

- Collaborators (US only): Jackson State University: G. Hall, J. Leszczynski, Ray, P.B, P.. Tchounowou; L. Gorb, (ERDC, Vicksburg, MS); F. Hagelberg (EastTennessee State)
- Collaborators (International): T. Puzyn, A. Gajewicz, M. Jozwiak, P. Urbaszek (Poland), A. Toropov, A. P Toropova, E. Benfenati, G. Gini (Italy), N. Koprovanac, H. Kusic (Croatia), N. Shtemenko (Ukraine)
- Graduate and Postdoctoral Advisors: Apolinary Kowal, Technical University of Wroclaw (retired), Joseph Delfino, University of Florida, Gainesville, Florida
- Postgraduate-Scholar Sponsor (2010-present): Dr. Corneliu Bogatu, environmental chemist, Dr. Anna Rabajczyk, environmental scientist, Dr. Dina Yegorova, environmental chemist, Dr. Malakhat Turabekova, computational chemist, Dr. Oksana Tsendra, computational chemist, Dr. Hrvoje Kusic, chemical engineer, Dr. Monika Paszkiewicz (environmental analytical chemist); Dr. <arek Golebiowski (environmental analytical chemist)
- Other professionals: Professor Natalia Shtemenko (chemistry), Professor Natalia Koprivanac (chemical engineering)
- Current Students:
 - o Graduate (M.S): Laura Burt, Joseph Paige, Stephen Castellano, Rajesh Veereppalli, Charles Lofton; Warren Hudson, Kira Shovkoplias (international exchange training), Bartlomiej Wysocki (international training)
 - o Graduate (doctorate): A.B.M Zakaria; Brian Copeland
 - o Undergraduate: (i) academic adviser for 35 students; (ii) research adviser: Tommetric hemingway (junior), Ammanuiel Kebede (senior), Chris Herron (graduated May 2013), Yulian Kebede (graduated May 2012), Fatimata Diop (graduated May 2012)

Current Research Areas: Computational (QSAR) and experimental study on properties and toxicity of nanomaterials; environmental impact of nanoparticles on quality of water (drinking and surface/groundwater), applications of magnetic field for bioscience and biotechnology; water, stormwater and wastewater (water matrix) contamination, treatment and management.

Awards and Honors:

- Member of National Academy of Inventors, July **2011**-present
- Letter of appreciations on behalf of the U.S. Department of State and the Institute of International Education, Department for Scholar and Professional Programs, the Council for International Exchange of Scholars (CIES) for service as Environmental Sciences 1 Peer Review Committee member, **2009-2011**
- Professorship Courtesy Appointment with Jiangnan University, Wuxi, Jiangsu, China, **2010-2012**
- Certificate of Appreciation from Student's Chapter of ASCE, Jackson, MS **2008**
- Faculty Fellowship at Lawrence Livermore National Laboratory, Livermore, CA, **2006-2007**
- Florida State University, FAMU-FSU College of Engineering, Department of Civil and Environmental Engineering, recognition of excellent service **1995-2006**
- Certificate of Recognition, Provost of the Wroclaw University of Technology, Wroclaw Poland, **2005**
- Fulbright Fellowship, **2004-2005**