

David Meyer, Chemical Engineer in EPA's National Risk Management Research Laboratory

Land and Materials Management Division

[Mailing Address](#)

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Area of Expertise:

- Sustainable materials management
- Integrated decision support with emphasis on sustainability
- Sustainable technology analysis
- Spatially resolved and risk-informed life cycle impact assessment methods
- Application of data mining, process modeling, and statistical analysis to estimate chemical releases for exposure assessment across the chemical life cycle
- Development of multi-region life cycle models that capture environmental and economic concerns when implementing sustainable materials management under the Resource Conservation and Recovery Act
- Creation of integrated data sets for life cycle and risk assessments using ontology design and semantic data management

Select Publications:

Mittal, V.K.; Bailin, S.C.; Gonzalez, M.A.; **Meyer, D.E.**; Barrett, W.M.; Smith, R.L.. [Toward Automated Inventory Modeling in Life Cycle Assessment: The Utility of Semantic Data Modeling to Predict Real-World Chemical Production](#). ACS Sustainable Chemical Engineering, 6 (2), pp 1961–1976. 2017.

Smith, R. L.; Ruiz-Mercado, G. J.; **Meyer, D. E.**; Gonzalez, M. A.; Abraham, J. P.; Barrett, W. M.; Randall, P. M. [Coupling Computer-Aided Process Simulation and Estimations of Emissions and Land Use for Rapid Life Cycle Inventory Modeling](#). ACS Sustainable Chemical Engineering, ASAP Article. 2017.

Csiszar, S.A.; **Meyer, D.E.** LCA in relation to risk assessment. *Encyclopedia of Sustainable Technologies*; ed. Abraham, M.; Elsevier Inc., 2017.

Csiszar, S.A.; **Meyer, D.E.**; Dionisio, K.L.; Egeghy, P.; Isaacs, K.K.; Price, P.S.; Scanlon, K.A.; Tan, Y.-M.; Thomas, K.; Vallero, D.; Bare, J.C. [A conceptual framework to extend life cycle assessment using near-field human exposure modeling and high-throughput tools for chemicals](#). Critical Reviews in Environmental Science and Technology, 50(21):11922-11934. 2016.

Fransman, W.; Buist, H.; Kuijpers, E.; Walser, T.; **Meyer, D.E.**; Zondervan-van den Beuken, E.; Westerhout, J.; Klein Entink, R.H.; Brouwer, D.H. Comparative Human Health Impact

Assessment of Engineered Nanomaterials in the Framework of Life Cycle Assessment. Risk Analysis, DOI: 10.1111/risa.12703. 2016.

Meyer, D. E.; Katz, J. P. [Analyzing the Environmental Impacts of Laptop Enclosures Using Screening-Level Life Cycle Assessment to Support Sustainable Consumer Electronics](#). Journal of Cleaner Production, 2016, 112, 369-383, DOI:10.1016/j.jclepro.2015.05.143

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Education:

- Ph.D., University of Kentucky, Lexington; Chemical Engineering, 2006
- B.S., University of Kentucky, Lexington; Chemical Engineering, 2000

Professional Experience:

- Task lead for life-cycle-based research in EPA's Chemical Safety for Sustainability and Sustainable and Healthy Communities Research Portfolios.
- Developer and co-PI of an EPA Peer Innovation Project applying linked open data management and machine learning to automatically generate chemical life cycle inventories to greatly reduce the time and resources needed to perform life cycle assessment (LCA).

Committees and Workgroups

- ORD representative on EPA working groups for application of life cycle assessment in sustainable materials management and life cycle considerations of chemicals.
- EPA ORD representative to U. S. ISO/TC 207/SC 5 for LCA
- Sustainability Tools Subject Editor, Journal of Cleaner Production (2012-2016)
- SETAC North American LCA Interest Group Chair (2015-2018)
- Reviewer of EPA external grant proposals, including STAR (Science to Achieve Results) grants, SBIR (Small Business Innovation Research) grants and Requests for Application for new Chemical Safety for Sustainability (CSS) Research Centers (2009-present)
- Reviewer for journals including *Environmental Science and Technology*, *ACS Sustainable Chemistry*, *Risk Analysis*, *Journal of Industrial Ecology*, *Journal of Nanoparticle Research*, and *Clean and Technologies and Environmental Policy*. (2010-present)

Select Honors and Awards

- ORD Statesman Award (2017)
- EPA Bronze Medal for Commendable Service (2013)
- EPA PeerOvation Notable Innovation Award (2012)
- National Science Foundation (NSF) - IGERT Fellow (Fall 2001-Fall 2004)
- Graduate Certificate in Sensing Technologies (2004)
- Daniel R. Reedy Fellow (Fall 2000 - Spring 2003)
- University of Kentucky Graduate Council, Student Representative (2001-2002)