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Education:

BS, Chemical Engineering, University of Michigan, 1985.
PhD, Chemical Engineering, University of Tennessee-Knoxville, 1994.

Professional Positions:

2001-Present: Group Leader, Nuclear Science and Technology Division, Oak Ridge National Laboratory
1999-Present: Adjunct Associate Professor, Department of Chemical Engineering, University of Tennessee
1996-2001: Group Leader, Chemical Technology Division, Oak Ridge National Laboratory
1986-1996: Development Engineer, Chemical Technology Division, Oak Ridge National Laboratory

Professional Activities:

Participant, NNI-Chemical Industry Consultative Board for Advancing Nanotechnology, 2004-present.
Chairman, 11th through 14th Symposia on Separation Science and Technology for Energy Applications.
Director, Separations Division of the American Institute of Chemical Engineers, 2002-2006.
Associate Editor, *Separation Science and Technology*, 2005-present

Recent Publications:

- Cheng, M.-D., D. W. Lee, B. Zhao, H. Hu, D. J. Styers-Barnett, A. A. Puretzky, D. W. DePaoli, D. B. Geohegan, E. A. Ford, and P. Angelini, "Study of formation and production of carbon nanohorns using continuous in-situ characterization techniques," submitted to *Nanotechnology*.
- Cheng, M.-D., E. A. Ford, D. W. DePaoli, E. A. Kenik, E. A., and P. Angelini, "On-line real-time characterization of engineered nanomaterials for nanomanufacturing applications," submitted to *Ind. Eng. Chem. Res.* (2006).
- Birdwell, J.F., J. McFarlane, D.L. Schuh, R.D. Hunt, H. Luo, D.W. DePaoli, S. Dai, "Separation of ionic liquid dispersions in centrifugal solvent extraction contactors," *Sep. Sci. Technol.* **41**, 2205-2223 (2006).
- Brady, T., S. Brown, D. W. DePaoli, J. Solomon, and T. Wooldridge, "ESH & nanotechnology: A joint study by the Chemical Industry Vision2020 and the Semiconductor Research Corporation" *Proc. 2006 IEEE Int'l Symp. on Electronics and the Environment* (2006).
- Toh, S.L.I., J. McFarlane, C. Tsouris, D.W. DePaoli, H. Luo, and S. Dai, "Room-temperature ionic liquids in liquid-liquid extraction: effects of solubility in aqueous solutions on surface properties," *Solvent Extraction and Ion Exchange* **24**, 33-56 (2006).
- Morton III, S.A., D.J. Keffer, R. M. Counce, and D. W. DePaoli, "Influence of aqueous/solid interactions on organic droplet contact angle in liquid/ liquid/solid systems," *Sep. Sci. Technol.* **41**, 2515-2531 (2006).
- Baltus, R.E., B.H. Culbertson, H. Luo, S. Dai, C. Liang, D. C. Duckworth, R. M. Counce, and D. W. DePaoli, "Examination of the potential of ionic liquids for gas separations," *Sep. Sci. Technol.*, **40**, 525-541 (2005).
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- Karim, K., K.T. Klasson, R. Hoffmann, S.R. Drescher, D.W. DePaoli, and M.H. Al-Dahhan, "Anaerobic digestion of animal waste: effect of mixing," *Bioresource Technology* **96**, 1607-1612 (2005).

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- Baltus, R.E., B.H. Culbertson, S. Dai, H. Luo, D.W. DePaoli, "Low-pressure solubility of carbon dioxide in room-temperature ionic liquids measured with a quartz crystal microbalance," *J. Phys. Chem. B.* **108**, 721-727 (2004).
- Ally, M.R., J. Braunstein, R.E. Baltus, S. Dai, D.W. DePaoli, J. M. Simonson, "Irregular ionic lattice model for gas solubilities in ionic liquids," *Ind. Eng. Chem. Res.* **43** (5), 1296-1301 (2004).
- Sarnobat, S.U., S. Rajput, D.D. Bruns, D.W. DePaoli, C.S. Daw, and K. Nguyen, "The impact of external electrostatic fields on gas-liquid bubbling dynamics," *Chem. Eng. Sci.* **59**, 247-258 (2004).
- Morton, S. A., D. J. Keffer, R. M. Counce, D. W. DePaoli, and M. Z. -C. Hu, "Thermodynamic method for prediction of surfactant-modified oil droplet contact angle," *J. Colloid Interf. Sci.* **270**, 229-241 (2004).
- DePaoli, D.W., C. Tsouris, and M. Z.-C. Hu, "EHD micromixing reactor for particle synthesis," *Powder Technol.* **135/6**, 302-309, (2003).
- Tsouris, C., C.T. Culbertson, D.W. DePaoli, S. C. Jacobson, V.F. de Almeida, and J. M. Ramsey, "Electrohydrodynamic mixing in microchannels," *AIChE J.* **49**, 2181-2186 (2003).
- Rowe, A. W., M. Z. Hu, D. W. DePaoli, and R. M. Counce, "Oil detachment from solid surfaces in aqueous surfactant solutions as a function of applied electrical potential," *Sep. Sci. Technol.* **38**, 2793-2813 (2003).
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- Dong, J., E.A. Payzant, M.Z. Hu, D.W. DePaoli, and Y.-S. Lin, "Synthesis of MFI-type zeolite membranes on porous α -alumina supports by wet gel crystallization in the vapor phase," *J. Mater. Sci.* **38**, 979-985 (2003).
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- Tsouris, C., K. D. Blankenship, J. Dong, and D. W. DePaoli, "Enhancement of distillation efficiency by application of an electric field," *Ind. Eng. Chem. Res.* **40**, 3843-3847 (2001).
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Patents:

- DePaoli, D.W., M. Z.-C. Hu, and C. Tsouris, "Method for the Production of Ultrafine Particles by Electrohydrodynamic Micromixing," US Patent 6,265,025 (2001).
- Tsouris C., D.W. DePaoli, and J.T. Shor, "A Method to Electrolytically Produce High-Purity Magnetite Powder," US Patent 6,179,987 (2001).
- DePaoli, D.W., C. Tsouris, and J.Q. Feng, "Method of Electrically Producing Dispersions of Nonconductive Fluids into Conductive Fluids," US Patent 5,762,775 (1998).