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a. Professional Preparation

Institution and Location	Degree & Date Conferred	Field of Study Thesis Title
University of Michigan, Ann Arbor, MI	Ph.D., '99	Chemical Engineering
Seoul National University, Seoul, Korea	M.S., '93	Chemical Engineering
Seoul National University, Seoul, Korea	B.S., '91	Chemical Engineering

b. Professional Experience

May 2007-present	Associate Professor. University of Toledo, Dept. of Chemical & Environmental Engineering, Toledo, OH.
Aug 2000 -Apr 2007	Assistant Professor. University of Toledo, Dept. of Chemical & Environmental Engineering, Toledo, OH.
Aug1999 -May 2000	Visiting Assistant Professor. University of Toledo, Dept. of Bioengineering, Toledo, OH.
1994-1999	Graduate Research Assistant. Industrial Affiliates Program. University of Michigan, Ann Arbor, MI.
1996-1997	Teaching Assistant. Department of Chemical Engineering, University of Michigan, Ann Arbor, MI.
1994-1996	Hazardous Substances Research Center (HSRC) Project, University of Michigan. Research Assistance.
1993-1994	Korea Institute of Science and Technology (KIST); Seoul, Korea. Researcher in Chemical Process Research Laboratory.
1984-1987	501st U.S. Army Military Intelligence Group. Operations specialist.

c. Refereed Publications (Last 3 years)

(i) Anti-Fouling Biomaterials

1. Sendamangalam VR, Choi OK, Seo Y, **Kim DS***. Antimicrobial and antioxidant activities of polyphenols against Streptococcus mutans. *Free Radicals and Antioxidants* 1(3):48-55 (2011).
2. Sendamangalam VR, Choi OK, Seo Y, **Kim DS***. Antibiofouling effect of polyphenols against Streptococcus mutans, *Biofouling Journal* 27(1):13-19 (2011).

(ii) Biosensors

3. Feyzizarnagh H, Yoon DY, Goltz MN, **Kim DS***. Advanced review peptide nanostructures in biomedical technology. *WIREs Nanomed Nanobiotechnol* doi: 10.1002/wnan.1393)(2016).
4. Feyzizarnagh H, Park BW, Sharma L, Patania M, Yoon DY, **Kim DS***. Amperometric mediatorless hydrogen

peroxide sensor with horseradish peroxidase encapsulated in peptide nanotubes. *Sensing and Bio-Sensing Research* 7 (2016) 38–41

5. Feyzizarnagh H, Haushalter EF, Grams EK, Cameron BD, Yoon DY, **Kim DS***. Protein sensing with aptamer immobilized on an antifouling binary self-assembled monolayer. *Industrial & Engineering Chemistry Research* 54:4072−4077 (2015).
6. Baker PA, Goltz MN, Schrand AM, Yoon DY, **Kim DS***. Organophosphate vapor detection on gold electrodes using peptide nanotubes. *Biosensors and Bioelectronics* 61:119-123 (2014).

(iii) Biomaterials

7. Makani V, Jang YG, Christopher K, Judy W, Eckstein J, Hensley K, Chiaia N, **Kim DS**, Park JJ*. BBB-Permeable polysaccharide, MIDI-GAGR, has a strong neuroprotective and neurotrophic effects. *PLoS ONE* 11(3): e0149715.
8. Christophera K, Makania V, Judya W, Lee E, Chiaia N, **Kim DS**, Park JJ*. Use of fluorescent ANTS to examine the BBB-permeability of polysaccharide. *MethodsX* 2:174–181 (2015).

(iv) Renewable Energy and Biodiesel Emissions

9. Omidvarborna H, Kumar A, **Kim DS***. Variation of diesel soot characteristics by different types and blends of biodiesel in a laboratory combustion chamber. *Science of the Total Environment* 544:450–459 (2016).
10. Omidvarborna H, Kumar A, **Kim DS***. NOx emissions from low-temperature combustion of biodiesel made of various feedstocks and blends. *Fuel Processing Technology* 140:113–118 (2015).
11. Omidvarborna H, Kumar A, **Kim DS***. Recent studies on soot modeling for diesel combustion. *Renewable and Sustainable Energy Reviews* 48:635–647 (2015).
12. Omidvarborna H, Kumar A, **Kim DS***. Characterization of particulate matter emitted from transit buses fueled with B20 in idle modes. *Journal of Environmental Chemical Engineering* 4:2335-2342 (2014).
13. Omidvarborna H, Kumar A, **Kim DS***, Venkata PKP, Bollineni VSP. Characterization and exhaust emission analysis of biodiesel in different temperature and pressure: Laboratory study. *Journal of Hazardous, Toxic, and Radioactive Waste Management*. 19(2):04014030 (2014).

d. Professional Activities

- Department Director for Undergraduate Program, 2010-present
- Department Director for Honors Program, 2010-present
- American Institute of Chemical Engineers, UT Student Chapter Advisor, 2002 – present
- Editorial advisory board, *Environmental Progress* and Sustainable Energy (an official publication of the American Institute of Chemical Engineers), 2004 – present
- Committee chair for DoWonSuk Memorial Award, U.S. Chapter of Korean Institute of Chemical Engineers, 2004 – present
- UT Graduate Council, 2009-2010
- UT Advisory Committee for Undergraduate Research, Jan, 2007 - 2010
- Member, American Institute of Chemical Engineers, 1996-present.

e. Honors and Awards

- Air Force Summer Faculty Fellowship, 2010, 2011, 2013-2015
- Certified Professional Engineer (PE, Michigan), 2007-present
- Outstanding Undergraduate Research Mentor Award (College of Engineering), 2004
- Kohler Faculty International Travel Award, 2011, 2014
- Kohler Junior Faculty Award, 2001, 2004
- deArce Memorial Endowment Award, 2001
- U.S. Army Achievement Medal, 1987

f. Students Advising: Surachet Duanghathaipornsuk (Ph.D.), Hamid Omidvarbornagh (Ph.D.), Lohit Sharma (MS), Michelle Patania (MS)