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a. Professional Preparation

Seoul National University, South Korea	Materials Science and Engineering	*B.S.*	2004
Seoul National University, South Korea	Materials Science and Engineering	*M.S.*	2006
California Institute of Technology	Materials Science	*M.S.*	2008
California Institute of Technology	Materials Science	*Ph.D.*	2013
University of Pennsylvania	Chemical and Biomolecular Engineering	*Postdoc*	2012~2016

b. Appointments

Assistant Professor, Auburn University, Department of Chemical Engineering (2016-Present)

Postdoctoral Researcher, University of Pennsylvania, Department of Chemical and Biomolecular Engineering (2012-2016)

c. Publications

Yong Hao, Yunyi Ling, and **Tae-Sik Oh**, "Ni line pattern coarsening on zirconia substrates: impact of initial dimensions," Materials Letters, 2018, 214, 95.

Jaesik Yoon, Eunji Lee, Doohee Lee, **Tae-Sik Oh**, Young Soo Yoon, and Dong-Joo Kim, "Highly sensitive Ag/ZnO nanorods composite electrode for non-enzymatic urea detection," Journal of the Electrochemical Society, 2017, 164, B558

Yuan Cheng, **Tae-Sik Oh**, Rachel Wilson, Raymond J. Gorte, and John M. Vohs, "An investigation of LSF-YSZ conductive scaffolds for infiltrated SOFC cathodes," *Journal of the Electrochemical Society*, 2017, 164, F525.

Yicheng Zhao, **Tae-Sik Oh***, Yongdan Li, John M. Vohs, and Raymond J. Gorte, "Fabrication of $MnCo_2O_4$-YSZ composite cathodes for solid oxide fuel cells by electrodeposition," **Corresponding author**, *Journal of the Electrochemical Society*, 2016, 163, F863.

Tzia Ming Onn, Lisandra Arroyo-Ramírez, Matteo Monai, **Tae-Sik Oh**, Meghavi Talati, Paolo Fornasiero, Raymond Gorte, Mahmoud Mohamad Khader, "Modification of Pd/CeO_2 catalyst by ALD of ZrO_2," *Applied Catalysis B: Environmental*, 2016, 197, 280.

Yuan Cheng, Anthony S. Yu, Xiaoyan Li, **Tae-Sik Oh**, John M. Vohs, and Raymond J. Gorte, "Preparation of SOFC cathodes by infiltration into LSF-YSZ composite scaffolds," *Journal of the Electrochemical Society*, 2016, 163, F54.

Tae-Sik Oh, Ehsan K. Rahani, Dragos Neagu, John T. S. Irvine, Vivek B. Shenoy, Raymond J. Gorte, and John M. Vohs, "Evidence and model for strain-driven release of metal nano-catalysts from perovskites during exsolution," *Journal of Physical Chemistry Letters*, 2015, 6, 5106.

Dragos Neagu*, **Tae-Sik Oh***, David N. Miller, Hervé Ménard, Syed M. Bukhari, Stephen R. Gamble, Raymond J. Gorte, John M. Vohs, and John T.S. Irvine, "Nano-socketed nickel particles with remarkable coking resistance grown in situ by redox exsolution," **Equal contribution authors,** *Nature Communications*, 2015, 6:8120 DOI: 10.1038/ncomms9120.

Tae-Sik Oh and Sossina Haile, "Electrochemical behavior of thin-film Sm-doped ceria: Insight from the point-contact configuration," *Physical Chemistry Chemical Physics*, 2015, 17, 13501.

Anthony S. Yu, **Tae-Sik Oh**, Ran Zhu, Alexa M. Gallegos, Raymond J. Gorte, and John M. Vohs, "Surface modifications of $La_{0.8}Sr_{0.2}CrO_{3-\delta}$-YSZ dual-phase membranes for syngas production," *Faraday Discussions*, 2015, 182, 213.

Xiaoliang Zhou, **Tae-Sik Oh***, John M. Vohs, and Raymond J. Gorte, "Zirconia-based electrolyte stability in direct-carbon fuel cells with molten Sb anodes," **Corresponding author**, *Journal of the Electrochemical Society*, 2015, 162, F567.

Jiaxin Zhu, Carlos R. Pérez, **Tae-Sik Oh**, Rainer Küngas, John M. Vohs, Dawn A. Bonnell, and Stephen S. Nonnenmann, "Probing local electrochemical activity within yttria-stabilized-zirconia via in situ high-temperature atomic force microscopy," *Journal of Materials Research*, 2015, 30, 357.

Anthony S. Yu, Junyoung Kim, **Tae-Sik Oh**, Guntae Kim, Raymond J. Gorte, and John M. Vohs, "Decreasing interfacial losses with catalysts in $La_{0.9}Ca_{0.1}FeO_{3-\delta}$ membranes for syngas production," *Applied Catalysis A: General*, 2014, 486, 259.

Tae-Sik Oh, Anthony S. Yu, Lawrence Adijanto, Raymond J. Gorte, and John M. Vohs, "Infiltrated lanthanum strontium chromite anodes for solid oxide fuel cells: structural and catalytic aspects," *Journal of Power Sources*, 2014, 262, 207.

Krithiga Ganesan, Leonid A. Dombrovsky, **Tae-Sik Oh**, and Wojciech Lipinski, "Determination of optical constants of ceria by combined analytical and experimental approaches," *JOM*, 2013, 65, 1694.

Tae-Sik Oh, David Boyd, David Goodwin, and Sossina Haile, "Proton conductivity of columnar ceria films grown by chemical vapor deposition," *Physical Chemistry Chemical Physics*, 2013, 15, 2466.

Tae-Sik Oh, Yury S. Tokpanov, Yong Hao, WooChul Jung, and Sossina M. Haile, "Determination of optical and microstructural parameters of ceria films," *Journal of Applied Physics*, 2012, 112, 103535.

Han-Ill Yoo, **Tae-Sik Oh**, Hyung-Soon Kwon, Dong-Kyu Shin, and Jong-Sook Lee, "Electrical conductivity-defect structure correlation of variable-valence and fixed-valence acceptor doped $BaTiO_3$ in quenched state," *Physical Chemistry Chemical Physics*, 2009, 11, 3115.

M. Schrader, D. Mienert, **Tae-Sik Oh**, Han-Ill Yoo, and K. D. Becker, "An optical, EPR and electrical conductivity study of blue barium titanate," *Soild State Sciences*, 2008, 10, 768.

H.-I. Yoo, M.-W. Chang, **T.-S. Oh**, C.-E. Lee, and K. D. Becker, "Electrocoloration and oxygen vacancy mobility of $BaTiO_3$," *Journal of Applied Physics*, 2007, 102, 093701.

d. Synergistic Activities

1. Two NSF Grant Review Panels. Grant review for Dutch funding agency: GDST-NWO science industry cooperation programme - Chemistry of Advanced Materials.

2. Reviewer: ACS Catalysis, Applied Catalysis B, ACS Applied Materials & Interfaces, Journal of Power Sources, International Journal of Hydrogen Energy, Journal of Electrochemical Society, Catalysis Today, Solid State Communications.

3. Attended American Society of Engineering Education Chemical Engineering Summer School (2017). Raleigh, NC.

4. Chapter President of Alabama for Korean-American Scientists and Engineers Association.

5. Session co-chair for AIChE meeting (2017): Catalysis for C1 Chemistry.