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Professional Preparation

<i>Institution</i>	<i>Major / Area</i>	<i>Degree & Year</i>	
Hamburg University of Technology	Chemical Engineering	Diplom:	2000
Hamburg University of Technology	Chemical Engineering	Ph.D.:	2005
University of Minnesota	Theoretical Chemistry	Postdoc:	2006-2007

Appointments

2007 – present	Assistant Professor	Dept. of Chem. Eng., University of South Carolina
2007 – present	Assistant Professor	NanoCenter, University of South Carolina

Honor, Awards & Distinctions

Minnesota Supercomputing Institute Research Scholarship and Travel Grants	2006-2007
Council for the Lindau Nobel Laureate Meetings Participation Award	2006
Karl H. Ditze Award (leading Ph.D. thesis at the Hamburg University of Technology)	2006
Ewald Wicke Foundation Travel Grant	2005
Bayer AG Mentoring Program Membership	2000-2001
Charitable Trust of the German Industry Study Grant	1997-2000
German Academic Exchange Service Study Grant (to study at UC Berkeley)	1998-1999

Publications

Five most closely relevant to proposed project

Tenney, S., Ratliff, J., Roberts, C., He, W., Ammal, S. C., Heyden, A., Chen, D., Adsorbate-induced changes in the surface composition of bimetallic clusters: Pt-Au on TiO₂ (110). *J. Phys. Chem. C* (2010) DOI: 10.1021/jp108939h.

Ammal, S. C., Heyden, A., Modeling the noble metal/TiO₂ (110) interface with hybrid DFT functional: A periodic electrostatic embedded cluster model study. *J. Chem. Phys.* **133**, 164703 (2010).

Heyden, A., Lin, H., Truhlar, D. G., Adaptive partitioning in combined quantum mechanical and molecular mechanical calculations of potential energy functions for multiscale simulations. *J. Phys. Chem. B* **111**, 2231-2241 (2007).

Heyden, A., Hansen, N., Bell, A. T., Keil, F. J., Nitrous oxide decomposition over Fe-ZSM-5 in the presence of nitric oxide: A comprehensive DFT study. *J. Phys. Chem. B* **110**, 17096-17114 (2006).

Heyden, A., Bell, A. T., Keil, F. J., Efficient methods for finding transition states in chemical reactions: Comparison of modified dimer method and partitioned rational function optimization method. *J. Chem. Phys.* **123**, 224101-14 (2005).

