BIOGRAPHICAL SKETCH

Professor Howard Fairbrother

a. Professional Preparation

Oxford University (England)	Chemistry	B.A., 1989
Northwestern University	Chemistry	Ph.D., 1994
University of California, Berkeley	Chemistry – Postdoctorate	1994-1997

b. Appointments

Johns Hopkins University	Professor	2007-present
Johns Hopkins University	Associate Professor	2003-2007
Johns Hopkins University	Assistant Professor	1997-2003

c. Publications (2014-present)

(**1**) Bitter, J. L.; Yang, J.; Milani, S. B.; Jafvert, C. T.; Fairbrother, D. H., Transformations of oxidized multiwalled carbon nanotubes exposed to UVC (254 nm) irradiation. *Environmental Science: Nano* **2014**, (1), 324-337.

(**2**) Rosenberg, S. G.; Barclay, M.; Fairbrother, D. H., Electron Induced Surface Reactions of Organometallic Metal(hfac)$_2$ Precursors and Deposit Purification. *ACS Applied Materials & Interfaces* **2014,** 6, (11), 8590-8601.

(**3**) Tang, X.; Bumueller, D.; Lim, A.; Schneider, J.; Heiz, U.; Gantefor, G.; Fairbrother, D. H.; Bowen, K. H., Catalytic Dehydration of 2-Propanol by Size-Selected (WO3) and (MoO3)(n) Metal Oxide Clusters. *Journal of Physical Chemistry C* **2014,** 118, (50), 29278-29286.

(**4**) Wu, J. W.; Goodwin, D. G.; Peter, K.; Benoit, D.; Li, W. L.; Fairbrother, D. H.; Fortner, J. D., Photo-Oxidation of Hydrogenated Fullerene (Fullerane) in Water. *Environmental Science & Technology Letters* **2014,** 1, (12), 490-494.

(**5**) Spencer, J.; Rosenberg, S.; Barclay, M.; Wu, Y.-C.; McElwee-White, L.; Fairbrother, D. H., Understanding the Electron Stimulated Surface Reactions of Organometallic Complexes to Enable Design of Precursors for Electron Beam Induced Deposition. *Applied Physics A* **2014** 117, 1631-1644.

(**6**) Goodwin, D. G.; Marsh, K. M.; Sosa, I. B.; Payne, J. B.; Gorham, J. M.; Bouwer, E. J.; Fairbrother, D. H., Interactions of Microorganisms with Polymer Nanocomposite Surfaces Containing Oxidized Carbon Nanotubes. *Environmental Science and Technology* **2015,** 49, 5484-5492.

(**7**) Hou, W.-C.; Chowdhury, I.; Goodwin, J., D. G.; Henderson, W. M.; Fairbrother, D. H., Photochemical Transformation of Graphene Oxide in Sunlight. *Environmental Science & Technology Letters* **2015,** 49, 3435-3443.

(**8**) Spencer, J.; Brannaka, J. A.; Barclay, M.; McElwee-White, L.; Fairbrother, D. H., Electron-Induced Surface Reactions of η3-Allyl RutheniumTricarbonyl Bromide [(η3-C3H5)Ru(CO)3Br]: Contrasting the Behavior of Different Ligands. *J. Phys. Chem. C* **2015,** 119, 15349-15359.

(**9**) Thorman, R. M.; Kumar, T. P. R.; Fairbrother, D. H.; Ingolfsson, O., The role of low-energy electrons in focused electron beam induced deposition: four case studies of representative precursors. *Beilstein Journal of Nanotechnology* **2015,** 6, 1904-1926.

d. Recent Professional Activities

- 2013 – present, Senior Editor, Journal of Physical Chemistry
- Chair Elect, Colloids and Surfaces Division, American Chemical Society.
- Executive Committee Member, Surface Science Division, American Vacuum Society (AVS).
- Organizing committee for National Science Foundation (NSF) Workshop on "Nanomaterials and the Environment: The Chemistry and Materials Perspective" June 28-30, 2011, Arlington, VA
- Symposium Co-organizer "Engineered Nanomaterials Interacting with Natural and Engineered Interfaces" August 10-14, 2014 San Francisco, CA

e. Collaborators & Other Affiliations

Collaborators: K Bowen (JHU), M Bevan (JHU), E Bouwer (JHU), K. L. Chen (JHU), K Hagen (TU Delft, Holland), I Utke (EMPA, Switzerland), C Jafvert (Purdue), T Filley (Purdue) J Fortner (Washington U), O Ingolfsson (U Iceland), J Ranville (Colorado School of Mines), D Plata (Yale)

Graduate and Postdoctoral Advisors: P Stair (Northwestern U), E Weitz, Northwestern (U) Gabor Somorjai (UC, Berkeley)

Current Students: M Gallagher, D Goodwin, M Barclay, R Lankone, R Thorman, J Spencer, D Durkin