

## BIOGRAPHICAL SKETCH

DO NOT EXCEED FOUR PAGES.

NAME Allis, Damian, Gregory	POSITION TITLE Research Professor, Syracuse University		
eRA COMMONS USER NAME DGALLIS			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Syracuse University, Syracuse, NY	Ph.D.	1998-2004	Quantum Chemistry
Syracuse University, Syracuse, NY	B.S.	1994-1998	Chemistry

### A. Positions and Honors

#### Positions and Employment

ACTIVITY/OCCUPATION	BEGINNING DATE	ENDING DATE	FIELD	INSTITUTION/COMPANY	SUPERVISOR/EMPLOYER
Technician	1995	1997	Neurophysiology	Syracuse Research Corporation, VA Hosp.	Brad Motter, Ph.D.
Graduate Student	1998	2004	Molecular electronics, Nanoscience	Syracuse University	James Spencer, Ph.D.
Graduate Student	2001	2004	Neutron Scattering Spectroscopy	Syracuse University	Bruce Hudson, Ph.D.
Consultant	2003	2007	Radiopharma. Development	Molecular Insight Pharmaceuticals, Inc.	John Babich, Ph.D.
Research Fellow	2005	Present	Molecular manufacturing	Molecular Engineering Research Institute	J. Storrs Hall Ph.D.
Research Fellow	2005	2007	Terahertz Spectroscopy	Intelligence Community Post-doctoral Research Fellowship Program	Tom Kennedy (Program Head)
Senior Scientist	2006	2008	Molecular Modeling and CAD Design	Nanorex, Inc.	Mark Sims

#### Other Experience and Professional Memberships

2007 – present Nanotechnology and Chemistry Advisory Board Member, Lifeboat Foundation  
2007 – present Member, International Society of Nanoscale Science, Computation, and Engineering  
2005 – present Working Group Member, Technology Roadmap for Productive Nanosystems (Battelle Memorial Institute and Foresight Nanotech Institute)  
2005 – present Reviewer, Inorganic Chemistry Communications and Chemical Physics Letters  
2003 – present Syracuse Astronomical Society, Board of Directors (2003-) and President (2007-)  
1997 – present Member, American Association for the Advancement of Science  
1997 – present Member, The Foresight Institute  
1996 – present Member, The Planetary Society  
1995 – present Member, American Chemical Society

#### Honors and Awards

Marquis Who's Who in America, Science and Engineering, and World  
Foresight Distinguished Student Award in Nanotechnology (2004)  
Syracuse University All-University Graduate Fellowship (1998-2001, three year appointment)

Who's Who Among Students in America's Colleges and Universities (1998)  
Phi Beta Kappa (1998)  
Syracuse University Merck Index Award (1998)  
Golden Key National Honors Society (1996)  
Phi Eta Sigma (1995)  
Syracuse University Honors Program (1994-8)  
Syracuse University Dean's Scholar (1994-8, all semesters)

## B. Publications and Presentations

### Selected Peer-Reviewed Publications

31. Hakey P.M., Allis D.G., Ouellette W., and Korter T.M. "The Cryogenic Terahertz Spectrum Of (+)-Methamphetamine Hydrochloride And Assignment Using Solid-State Density Functional Theory." *J. Phys. Chem. A*, 113(17) (2009) 5119–5127.
29. Petrus A.K., Allis D.G., Smith R.P., Fairchild T.J., and Doyle R.P. "Exploring The Implications Of Vitamin B12 Conjugation To Insulin On Insulin Receptor Binding And Cellular Update." *ChemMedChem*, 4(3) (2009) 421-426.
28. Rivera S., Allis D.G., and Hudson B.S. "Importance Of Vibrational Zero-Point Energy Contribution To The Relative Polymorph Energies Of Hydrogen-Bonded Species." *Crystal Growth and Design* 8(11) (2008) 3905–3907.
26. Allis D.G., Hakey P.M., and Korter T.M. "The Solid-State Terahertz Spectrum Of MDMA (Ecstasy) – A Unique Test For Molecular Modeling Assignments." *Chemical Physics Letters*, 463 (2008) 353-356.
25. O'Leary D.J., Allis D.G., Hudson B.S., James S., Morgera K.B., and Baldwin J.E. "Vicinal Deuterium Perturbations On Hydrogen NMR Chemical Shifts In Cyclohexanes." *Journal of the American Chemical Society*, 130(41) (2008) 13659-13663.
16. Allis D.G. and Korter T.M. "Theoretical Analysis Of The Terahertz Spectrum Of The High Explosive PETN." *Chemphyschem: A European Journal of Chemical Physics and Physical Chemistry* 7(11) (2006) 2398-408.
14. James S., Maresca K.P., Allis D.G., Valliant J.F., Eckelman W., Babich J.W., and Zubieta J. "Extension Of The Single Amino Acid Chelate Concept (SAAC) To Bifunctional Biotin Analogues For Complexation Of The M(CO)<sub>3</sub>+1 Core (M = Tc And Re): Syntheses, Characterization, Biotinidase Stability And Avidin Binding." *Bioconjugate Chemistry* 17 (2006) 579-589.
12. Allis D.G., Prokhorova D.A., and Korter T.M. "Solid-State Modeling Of The Terahertz Spectrum Of The High Explosive HMX." *Journal of Physical Chemistry A* 110 (2006) 1951-1959 (*Science Editor's Choice* vol. 311, No. 5761 (2006) and *C&E News, Science and Tech. Concentrates*, vol. 84, No. 6, (2006)).
10. Hudson B.S., Allis D.G., Parker S.F., Braden D.A., Herman H. and Prinzbach H. "The Infrared, Raman And Inelastic Neutron Scattering Spectra Of Dodecahedrane: An Ih molecule In T<sub>h</sub> Site Symmetry." *Journal of Physical Chemistry A* 109 (2005) 3418-3424.
4. Chapter: Allis D.G. and Spencer J.T. *Nanostructural Architectures from Molecular Building Blocks*. CRC Handbook of Nanoscience, Engineering, and Technology, 2<sup>nd</sup> Edition, Goddard III W.A.; Lyshevski S.E.; Brenner D.W.; Larfrate G.J. (Editors); Francis and Taylor Publishers, 2007.

### Patents

Pat. 2001027028 A1 20010419. Application: WO 2000-US27732 20001006. Priority: US 99-159301 19991014; US 2000-679929 20001005. Design and Fabrication of Molecular Nanostructures From Polyhedral-Based Molecular Synthetic Subunits.

Pat. 2001000631 A1 20010104. Application: WO 2000-US17461 20000623. Priority: US 99-141346 19990628; US 2000-602424 20000623. New Classes of High Linear and Nonlinear Response Compounds.