Aaron C. Noell

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Education

California Institute of Technology, Pasadena — Atmospheric Chemistry — Ph.D., 2010

New York University, New York — Chemistry — B.A., 2002

Professional Experience

Jet Propulsion Laboratory, Pasadena — 12/2009 – present
NASA Postdoctoral Program Fellow: Luminescence detection of bacterial spores

California Institute of technology/Jet Propulsion Laboratory, Pasadena — 06/2004 – 11/2009
Graduate Student Research Assistant: Atmospheric chemistry of HO_x and RO_x radicals

Brookhaven National Lab — Brookhaven, NY — 06/2002 - 10/2002
Research Assistant: PHOBOS at the Relativistic Heavy Ion Collider (RHIC). Helped build a triggering detector to identify strong collisions

Fellowships and Awards

JPL Postdoc Poster Day, Best Poster for Planetary Science and Life Detection — 2011

NASA Postdoctoral Program Fellow — 2009 – 2011

NASA Graduate Student Researchers Program Fellowship — 2004 – 2007

Outstanding Student at DOE Nuclear Chemistry Summer School at San Jose St. University — 2001

Leadership Experience

Co-Organizer of the 2012 Astrobiology Graduate Conference — 2011-2012

JPL Chemical Kinetics Group Meeting Organizer — 2004-2009

Teaching Experience

California Institute of Technology — Pasadena, CA — Fall/Wint/Spr 2006-2007
Teaching Assistant, Chem 6 Physical chemistry lab

California Institute of Technology — Pasadena, CA — Spring 2005, Fall/Wint/Spr 2003-2004
Teaching Assistant, Chem 21 a,b,c The physical description of chemical systems

New York University — New York, NY — Fall/Spring 2001-2002
Teaching Assistant, General Chemistry Lab

Mentors

Professor Mitchio Okumura and Dr. Stanley P. Sander, Graduate Advisors

Dr. Adrian Ponce, Postdoctoral advisor

Technical Skills

Sporulation protocols for *Bacillus* spores, simple wet chemistry

Fluorescence microscopy detection of bacterial spores

Data analysis: Statistics, large data set handling/sorting, modeling

Image and spectral processing (Digital filtering, background subtraction, flattening etc.)

Frequency modulation spectroscopy techniques, diode laser spectroscopy, basic electronics

FTIR, UV-Vis absorption, optical setups, vacuum and gas handling system techniques

Software Skills

Proficiency in: FACSIMILE, Igor Pro, Matlab, Excel, Word, Power Point

Familiarity with: Visual BASIC, C, LabView, Mathematica

Publications

Noell, A.C., Yung, P.T., Mitchell, A., Ponce, A. "A Rapid Automated Instrument for Determining Sterilization Efficacy." *Manuscript in Preparation*

Noell, A.C. and Ponce A. "Age of Glacial Dust Layers and Soils at Kilimanjaro's Northern Ice Field." *Manuscript submitted, Geophysical Research Letters*

Grieman, F.J**., Noell, A.C.**, Davis-Van Atta, C., Okumura,M., Sander, S.P. "Determination of Equilibrium Constants for the Reaction Between Acetone and HO2 Using Infrared Kinetics Spectroscopy," *Accepted , Published online, Journal of Physical Chemistry A*

Noell, A. C., Alconcel, L. S., Robichaud, D. J., Okumura, M., Sander, S. P. "Near-Infrared Kinetic Spectroscopy of the HO_2 and $C_2H_5O_2$ Self-Reactions and Cross Reactions," *The Journal of Physical Chemistry A* 2010, *114*, 6983.

Conference Presentations

EPSC-DPS Joint meeting, Nantes, France, Oct. 2011, "*Measuring Total and Germinable Spore Populations."* ***poster***

Jet Propulsion Laboratory Postdoc Poster Day, Pasadena, CA, Sept. 2011 "*Rapid bacterial spore detection by time gated luminescence."* ***poster***

Astrobiology Graduate Conference, Bozeman, MT, June 2011 *"Rapid bacterial spore detection by time gated luminescence."* ***talk***

Nordic-NASA Astrobiology Summer School Participant, Iceland, July 2009

Atmospheric Chemical Mechanism Conference, Davis, CA 2008, "*Measurements of the RO_2 + RO_2 self reaction kinetics and radical product channel branching fraction*," ***talk***

Atmospheric Chemical Mechanism Conference, Davis, CA 2008, "*Evidence for photoinduced nucleation: Does the HO_2 radical play a role?,*" ***talk***