

Aaron M. Jubb

Cooperative Institute for Research in
Environmental Sciences (CIRES)
Chemical Sciences Division
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Professional Appointments

CIRES Research Scientist I **2012 - Present**
Chemical Sciences Division Atmospheric Composition and Chemical Processes Lab
Earth Systems Research Laboratory
National Oceanic and Atmospheric Administration and University of Colorado - Boulder
Boulder, Colorado 80305

- Supervisor: Dr. James B. Burkholder

Education

Ph.D. Analytical Chemistry - Department of Chemistry and Biochemistry **2006-2012**
The Ohio State University, Columbus, Ohio 43210

- Advisor: Dr. Heather C. Allen
- I Vibrational Spectroscopic Investigations of Sulfate Behavior at Environmental Interfaces

B.A. Chemistry - Department of Chemistry **2002-2006**
Lawrence University, Appleton, Wisconsin 54911

- Advisors: Dr. Karen J. Nordell (Academic) and Dr. David E. Thompson (Research)

Professional Affiliations

- American Chemical Society
- American Geophysical Union

Awards and Honors

- Faure Award - International Association of GeoChemistry **2011**
- Global Center of Excellence Workshop Fellowship Tohoku University, Sendai, Japan **2011**
- Student Travel Award Annual Meeting of the Geological Society of America **2011**
- Student Travel Award Gordon Research Conference: Vibrational Spectroscopy **2010**

Publications

- 1) F H -perfluoroheptene-ether Mixtures: OH Radical Reaction Rate
Coeffi 1F Q 1 L U
A.M. Jubb, T. Gierczak, M. Baasandorj, R.L. Waterland, and J.B. Burkholder *In Preparation*
- 2) 1,2-Dichlorohexafluoro-Cyclobutane (1,2-c-C₄F₆C₁₂, R-316c) a Potent Ozone Depleting
Substance and Greenhouse Gas: Atmospheric Loss Processes, Lifetimes, and Ozone Depletion
and Global Warming Potentials for the (E)- and (Z)- Stereoisomers
V.C. Papadimitriou, M.R. McGillen, S.C. Smith, **A.M. Jubb**, R. Portmann, B.D. Hall, E.L.
Fleming, C.H. Jackman, and J.B. Burkholder
Submitted to Journal of Physical Chemistry A 8/6/2013
- 3) Laser Effects on Volta Potential Transients Recorded by a Kelvin Probe
D. Verreault, **A.M. Jubb**, G.S. Frankel, M. Stratmann, H.C. Allen, and R. Posner
ECS Electrochemistry Letters, **2013**, 2 (5), H19-H21
- 4) Sulfate Adsorption at the Buried Hematite Solution Interface Investigated using Total Internal
Reflection (TIR)-Raman Spectroscopy
A.M. Jubb, D. Verreault, R. Posner, L.J. Criscenti, L.E. Katz, and H.C. Allen
Journal of Colloid and Interface Science, **2013**, 400, 140-146
- 5) Simultaneous In-situ Kelvin Probe and Raman Spectroscopy Analysis of Electrode Potentials
and Molecular Structures at Polymer Covered Salt Layers on Steel
R. Posner, **A.M. Jubb**, G.S. Frankel, M. Stratmann, and H.C. Allen
Electrochimica Acta, **2012**, 83, 327-334
- 6) Bisulfate Dehydration at Air Solution Interfaces Probed by Vibrational Sum Frequency
L X
A.M. Jubb and H.C. Allen
Journal of Physical Chemistry C, **2012**, 116 (24), 13161-13168
- 7) Sulfate Adsorption at the Buried Fluorite Solution Interface Revealed by Vibrational Sum
Frequency Generation Spectroscopy
A.M. Jubb and H.C. Allen
Journal of Physical Chemistry C, **2012**, 116 (16), 9085-9091

- 8) A Simultaneous Kelvin Probe and Raman Spectroscopy Approach for In-situ Surface and Interface Analysis
R. Posner, **A.M. Jubb**, G.S. Frankel, M. Stratmann, and H.C. Allen
Electrochimica Acta, **2012**, 76, 34-42
- 9) J H Water Interfaces: Insights from Vibrational Sum
Freq L X
A.M. Jubb, W. Hua, and H.C. Allen
Annual Reviews of Physical Chemistry, **2012**, 63, 107-130
- 10) T F W N X X
Frequency Spectroscopy at the Vapor Liquid and Liquid X N
A.M. Jubb, W. Hua, and H.C. Allen
Accounts of Chemical Research, **2012**, 45 (1), 110-119
- 11) J K W SO_4 , $(NH_4)_2SO_4$, and Na_2CO_3 relative to $CaCl_2$ and $NaCl$ at the
Air Aqueous Interface revealed by Phase-X X K
W. Hua, **A.M. Jubb**, and H.C. Allen
Journal of Physical Chemistry Letters, **2011**, 2, 2515-2520
- 12) X H M I I and Magnetite Thin Films
U I
A.M. Jubb and H.C. Allen
ACS Applied Materials and Interfaces, **2010**, 2 (10), 2804-2812
- 13) F N U F F N
M. Xu, C.Y. Tang, **A.M. Jubb**, X. Chen, and H.C. Allen
Journal of Physical Chemistry C, **2009**, 113 (6), 2082-2087

Presentations

- 1) F H X -perfluoroheptene-ethers Used as Heat Transfer Fluid
Replacement Compounds: Measured OH Radical Reaction Rate Coefficients, Atmospheric
Q I L U
A.M. Jubb, T. Gierczak, M. Baasandorj, R.L. Waterland, and J.B. Burkholder
Poster presented at the 2013 Fall Meeting of the American Geophysical Union, December **2013**,
San Francisco, CA.
- 2) F H -perfluoroheptene-ethers (MPHEs): OH Radical Reaction
Rate H 1F Q 1 L U
A.M. Jubb, T. Gierczak, M. Baasandorj, R.L. Waterland, and J.B. Burkholder
Poster presented at the 2013 Global Monitoring Annual Conference, May **2013**, Boulder, CO.
- 3) Sulfate Adsorption at Buried Mineral/Solution Interfaces Probed via Vibrational Surface
Spectroscopy
A.M. Jubb, D. Verreault, and H.C. Allen
Invited talk at the 22nd V.M. Goldschmidt Conference, June **2012**, Montreal, Quebec, Canada.

- 4) N T W J K at Air Aqueous Interfaces Revealed by Heterodyne-I X K L X
W. Hua, Z. Huang, **A.M. Jubb**, and H.C. Allen
Invited talk at the 67th meeting of the International Symposium on Molecular Spectroscopy, June **2012**, Columbus, OH.
- 5) Bisulfate (HSO₄⁻) Dehydration at the Vapor Solution Interface Probed by Vibrational Sum K L X
A.M. Jubb and H.C. Allen
Contributed talk at the 67th meeting of the International Symposium on Molecular Spectroscopy, June **2012**, Columbus, OH.
- 6) U F F X X Y N W
W X
A.M. Jubb and H.C. Allen
Contributed talk at the 2011 Geological Society of America Annual Meeting, October **2011**, Minneapolis, MN.
- 7) Q -linear Optical Spectroscopic Investigations of Anion Adsorption at Environmentally Relevant Aqueous Mineral Interfaces: Sulfate Adsorption at Fluorite and M X
A.M. Jubb and H.C. Allen
Contributed talk at the 242nd American Chemical Society National Meeting, August **2011**, Denver, CO.
- 8) F G F Mineral Interface via Vibrational Sum Frequency Generation: X F K X
A.M. Jubb and H.C. Allen
Poster presentation at the 242nd American Chemical Society National Meeting, August **2011**, Denver, CO.
- 9) Probing Water and Solute Structure at Environmental Interfaces: Vibrational Sum Frequency Generation Studies
A.M. Jubb, W. Hua, and H.C. Allen
Invited talk at the Global Center of Excellence (COE) Summer School, August **2011**, Tohoku University, Sendai, Japan.
- 10) J ctrolyte Binding at the Aqueous Solid Interface: A Vibrational Sum Frequency Generation Investigation
A.M. Jubb and H.C. Allen
Poster presented at the Vibrational Spectroscopy Gordon Research Conference, August **2010**, University of New England, Biddeford, ME.
- 11) X X H
A.M. Jubb and D.E. Thompson
Contributed talk at the Physical Sciences and Mathematics Undergraduate Research Symposium November **2005**, University of Chicago, Chicago, IL.