

Saturday, May 09, 2009

3:00 PM *Registration*6:00 PM *Reception*

Sponsored by Infrared Systems Development and Infrared Associates

Sunday, May 10, 2009

7:30 AM *Breakfast*8:50 AM *Opening Remarks*

Andrei Tokmakoff, MIT

9:00 AM *Water and Hydrogen Bonding*

Presiding: Minhaeng Cho, Korea University

9:00 AM In **T. Elsaesser**, L. Szyc, M. Yang, J. R. Dwyer, E. T. J. Nibbering, Max-Born Institute

Ultrafast vibrational dynamics of hydrated DNA

9:40 AM C **H.J. Bakker**, C. Petersen, K.-J. Tielrooij, AMOLF

Melting of hydrophobic icebergs

10:00 AM C **Damien Laage**, Guillaume Stirnemann, James T. Hynes, Ecole Normale Supérieure

Why water reorientation slows down without iceberg formation around hydrophobic solutes

10:20 AM C **Artem A. Bakulin**, Wayne Liang, Thomas la Cour Jansen, Douwe A. Wiersma, Huib J. Bakker, Maxim S. Pshenichnikov, Univ. Groningen

Do hydrophobic groups stabilize the water structure?

10:40 AM *Break*11:10 AM *Biochemical Dynamics*

Presiding: Minhaeng Cho, Korea University

11:10 AM In **Richard A. Mathies**, Renee R. Frontiera, Chong Fang, Jyotishman Dasgupta, Mark Creelman, Sangdeok Shim, UC Berkeley

Femtosecond Stimulated Raman Spectroscopy of Chemical and Biochemical Reaction Dynamics

11:50 AM C **W. Zinth**, W. J. Schreier, J. Kubon, N. Regner, K. Haider, T. E. Schrader, P. Clivio, P. Gilch, University of Munich

Ultrafast IR-spectroscopy: CPD-photodamage in DNA is formed from the excited singlet state

12:10 PM C Allison Stelling, Minako Kondo, Allison Haigney, Ian Clark, Adeibert Bacher, Peter J. Tonge, **Stephen R. Meech**, University of East Anglia

Early Events in the Blue-Light Sensing BLUF Domain Protein Viewed Through Time Resolved IR

12:30 PM *Lunch*2:00 PM *Chemical Dynamics*

Presiding: Kevin Kubarych, Univ. of Michigan

2:00 PM C S. Takeuchi, S. Ruhman, T. Tsuneda, M. Chiba, T. Taketsugu, **T. Tahara**, RIKEN

Observing continuous structural change of reacting molecules: ISRS and computational study on the reaction coordinate of photoisomerization of cis-stilbene

2:20 PM C Jaane Seehusen, Jorg Lindner, Dirk Schwarzer, and **Peter Vohringer**, University of Bonn

Ultrafast vibrational dynamics of artificial hydrogen-bond networks

2:40 PM C M. Panman, P. Bodis, B.H. Bakker, A.M. Brouwer, W.J. Buma, E.R. Kay, D.A. Leigh, **S. Woutersen**, University of Amsterdam

Real-time observation of shuttling molecular devices

3:00 PM C **Karin Haider**, Thorben Cordes, Teja Herzog, Gehad Zeyat, Karola Ruck-Braun, and Wolfgang Zinth, Lehrstuhl für BioMolekulare Optik

The Photochemistry of Chromenes Studied with Time-Resolved Infrared Spectroscopy

3:20 PM *Break*

Sponsored by Tokyo Instruments

3:50 PM *Multidimensional Spectroscopy*

Presiding: Kevin Kubarych, Univ. of Michigan

3:50 PM In **Shaul Mukamel**, Oleksiy Roslyak, Cyril Falvo, and Benoit Palmieri

Time Resolved Stimulated Vibrational Spectroscopy with pulse shaping and entangled photons

4:30 PM C **Igor V. Rubtsov**, Valeriy M. Kasyanenko, Grigory I. Rubtsov, Christopher Keating, Zhiwei Lin, Tulane University

Correlating Energy Transport Time with Distance using Relaxation-Assisted 2DIR

4:50 PM C Patrick F. Tekavec, Jeffrey A. Myers, Kristin L. M. Lewis, Franklin Fuller, **Jennifer P. Ogilvie**, University of Michigan-Ann Arbor

Two-dimensional electronic spectroscopy with a continuum probe

6:00 PM *Dinner*7:30 PM *Poster Session 1*

Monday, May 11, 2009

7:30 AM	Breakfast	
9:00 AM	Imaging and Single Molecules	Presiding: Andrei Tokmakoff, MIT
9:00 AM	In X. Sunney Xie , Christian W. Freudiger, Wei Min, Brian G. Saar, <i>Harvard University</i>	<i>Label-Free Biomedical Imaging with High Sensitivity by Stimulated Raman Scattering Microscopy</i>
9:40 AM	In J. A. Dieringer, K. L. Wustholz, J. P. Camden, S. L. Kleinman, D. J. Masiello, Y. Wang, R. B. Lettan, K. Scheidt, L. Marks, G. C. Schatz, R. P. Van Duyne , <i>Northwestern University</i>	<i>Advances in Single-Molecule Surface-Enhanced Raman Spectroscopy</i>
10:20 AM	Break	Sponsored by Renishaw
10:50 AM	Emerging Methods	Presiding: John Asbury, <i>Pennsylvania State University</i>
10:50 AM	In Hanju Rhee and Minhaeng Cho , <i>Korea University</i>	<i>Ultrafast characterization of vibrational optical activity</i>
11:30 AM	C Jan Helbing and Matthias Bonmarin, <i>Universitat Zurich</i>	<i>Transient Vibrational Circular Dichroism Spectroscopy</i>
11:50 AM	C Kristina Wilson, Brendon Lyons, David McCamant , <i>University of Rochester</i>	<i>Two-dimensional stimulated Raman spectroscopy: New developments in theory and experiments that probe intra- and inter-molecular anharmonicity</i>
12:10 PM	C T. Buckup , J. Mohring, M. Motzkus, <i>Philipps University Marburg</i>	<i>Pump-DFWM as multidimensional method to investigate molecular vibrations in the excited state of biological molecules</i>
12:30 PM	Lunch	
2:00 PM	Ultrafast Dynamics	Presiding: Munira Khalil, <i>University of Washington</i>
2:00 PM	In Oshrat Bismuth, Amir Wand, Noga Friedman, Mordechai Sheves, Stanford Ruhman , <i>Hebrew University</i>	<i>Investigating the excited state of the retinal protein chromophore with transient impulsive Raman</i>
2:40 PM	In D. Vorobyev, D. Kuroda, F. Kuo, R. M. Hochstrasser , <i>University of Pennsylvania</i>	<i>Ultrafast IR studies of aqueous ions</i>
3:20 PM	Break	Sponsored by ThermoElectron
3:50 PM	Charge Transfer	Presiding: Munira Khalil, <i>University of Washington</i>
3:50 PM	C Katrin Adamczyk, Mirabelle Premont-Schwarz, Jens Dreyer, Dina Pines, Ehud Pines, Erik T.J. Nibbering , <i>Max Born Institut</i>	<i>Ultrafast aqueous protonation dynamics of cyanate and bicarbonate</i>
4:10 PM	C Ryan D. Pensack, Kyle M. Banyas, John B. Asbury , <i>Pennsylvania State University</i>	<i>2D IR Spectroscopic Study of Charge Traps in Organic Photovoltaic Polymer Blends</i>
4:30 PM	C Chantelle Anfuso-Cleary, Tianquan Lian , <i>Emory University</i>	<i>Vibrational Sum-Frequency Generation Study of Interfacial Charge Transfer Complexes of Single Crystal TiO₂ Surfaces</i>
4:50 PM	C Sean T. Roberts , Poul B. Petersen, Krupa Ramasesha, and Andrei Tokmakoff, MIT	<i>Transport of the Aqueous Hydroxide Ion Probed Through Ultrafast Two-Dimensional Infrared Spectroscopy</i>
6:00 PM	Dinner	
7:30 PM	2D IR spectroscopy	Presiding: Thomas Elsaesser, <i>Max Born Institute</i>
7:30 PM	In M. D. Fayer , J. Zheng, H. Ishikawa, D. E. Moilanen, K. Kwak, D. E. Rosenfield, <i>Stanford University</i>	<i>Investigations of Chemical Dynamics with Ultrafast 2D IR Vibrational Echo Chemical Exchange Spectroscopy</i>
8:10 PM	In Martin Zanni , <i>University of Wisconsin-Madison</i>	<i>Residue-by-residue structural and time resolution with pulse shaping 2D IR spectroscopy and isotope labeled peptides</i>

Tuesday, May 12, 2009

7:30 AM	Breakfast	
9:00 AM	Imaging and Single Molecules	Presiding: Jennifer Ogilvie, <i>University of Michigan</i>
9:00 AM	In Hiro-o Hamaguchi , <i>University of Tokyo</i>	<i>Toward single molecule and single cell time-resolved vibrational spectroscopy</i>
9:40 AM	In Gilad Haran , <i>Weizmann Institute of Science</i>	<i>Single-Molecule Raman Scattering: from Plasmonics to Charge Transfer</i>
10:20 AM	C H. Peter Lu , Yuanmin Wang, <i>Bowling Green State University</i>	<i>AFM-Raman Imaging Analysis of Single-Molecule Interfacial Electron Transfer Dynamics</i>

10:40 AM	Break		
11:10 AM	Spectroscopy at Interfaces		Presiding: Jennifer Ogilvie, <i>University of Michigan</i>
11:10 AM	In	Jeffrey A. Carter, Zhaohui Wang, Alexei Lagutchev, Dana D. Diott , <i>University of Illinois-Urbana Champaign</i>	<i>Dynamics at interfaces probed by time-resolved sum-frequency generation spectroscopy</i>
11:50 AM	C	Yi Rao, Nicholas J. Turro, Kenneth B Eissenthal , <i>Columbia University</i>	<i>Time Resolved Vibrational Sum Frequency Generation (SFG) at Liquid Surfaces</i>
12:10 PM	C	Juraj Bdzoch, Jan Zacharias, Martin Wolf, Christian Frischkorn , <i>Freie Universitat Berlin</i>	<i>Vibrational response of D2O molecules in thin layers absorbed on Ru(001) after femtosecond UV excitation</i>
12:30 PM	Lunch		
2:00 PM	Proteins		Presiding: Stephen Meech, <i>University of East Anglia</i>
2:00 PM	C	Paul M. Champion , <i>Northeastern University</i>	<i>Recent Studies of Coherent Vibrational Motion in Biomolecules</i>
2:20 PM	C	Carsten Kötting , Klaus Gerwert, <i>Ruhr-Universitat Bochum</i>	<i>Proteins in Action: Monitored by tr(time-resolved) FTIR spectroscopy</i>
2:40 PM	C	Ziad Ganim , Kevin Jones, Andrei Tokmakoff, <i>MIT</i>	<i>2D IR Spectroscopy of Insulin Dimer Dissociation and Unfolding Dynamics</i>
3:00 PM	Break		
3:30 PM	Multidimensional Spectroscopy		Presiding: Stephen Meech, <i>University of East Anglia</i>
3:30 PM	C	Charles B. Harris , James F. Cahoon, Karma R. Sawyer, Jacob P. Schlegel, Matthew C. Zuerb, <i>University of California-Berkeley</i>	<i>Using two dimensional vibrational spectroscopy to determine transition state geometries in liquids</i>
3:50 PM	C	Michael Lynch, Mark Cheng, Benjamin Van Kuiken, Munira Khalil , <i>University of Washington-Seattle</i>	<i>Understanding vibrational interactions on the ground and electronic excited states of transition metal complexes using multidimensional visible-infrared spectroscopies</i>
4:10 PM	C	Carlos R. Baiz, Matthew J. Nee, Robert McCanne, Kevin J. Kubarych , <i>University of Michigan</i>	<i>Temperature-dependent vibrational relaxation measured by non-equilibrium 2DIR spectroscopy</i>
4:30 PM	C	A.I. Stewart, R. Kania, G.M. Greetham, I.P. Clark, M. Towrie, A.W. Parker, N.T. Hunt , <i>University of Strathclyde</i>	<i>Vibrational Dynamics of a Free Radical Intermediate via Transient 2D-IR Spectroscopy of a Photolysis Reaction</i>
6:00 PM	Dinner		
7:30 PM	Poster Session 2		

Wednesday, May 13, 2009

7:30 AM	Breakfast		
9:00 AM	Water and Peptides		Presiding: Huib Bakker, <i>AMOLF</i>
9:00 AM	In	Jim Skinner , <i>University of Wisconsin-Madison</i>	<i>Water and peptide structure and dynamics as probed by vibrational spectroscopy</i>
9:40 AM	C	V.V. Volkov, R. Righini , <i>University of Florence</i>	<i>Structural properties and dynamics of membrane associated anchor peptide</i>
10:00 AM	C	Ellen Backus , Robbert Bloem, Peter Hamm, <i>FOM Institute for Atomic and Molecular Physics</i>	<i>Glass transition regulated heat transport through a helical peptide</i>
10:20 AM	C	Thomas la Cour Jansen , Chungwen Liang, Jasper Knoester, <i>University of Groningen</i>	<i>Isotope label 2DIR spectroscopy in proteins</i>
10:40 AM	Break		
11:10 AM	Solid State and Terahertz		Presiding: Huib Bakker, <i>AMOLF</i>
11:10 AM	C	Matthias C. Hoffmann, Janos Hebling, Harold Y. Hwang, Ka-Lo Yeh, Keith A. Nelson , <i>MIT</i>	<i>THz-pump/THz-probe nonlinear spectroscopy</i>
11:30 AM	C	Tomonori Nomoto and Hiroshi Onishi, <i>Kobe University</i>	<i>Near-surface low-frequency vibrations of TiO2 observed by fourth-order coherent Raman spectroscopy</i>
11:50 AM	C	J. Mance, F.X. Morrissey, S.L. Dexheimer , <i>Washington State University</i>	<i>Acoustic and optical phonon dynamics in excitation self-trapping</i>
12:10 PM	C	C. Konek , J. Wilkinson, J. Hooper, O. Esenturk, E. Heilweil, <i>Indian Head, Naval Surface Warfare Center</i>	<i>Terahertz Spectroscopy of Explosives</i>
12:30 PM	Lunch		

2:00 PM		<i>Vibrational Dynamics in Liquids</i>	Presiding: Edwin Heilweil, <i>NIST</i>
2:00 PM	C	Takayoshi Kobayashi , Izumi Iwakura, and Atsushi Yabushita, <i>University of Electro-Communications</i>	<i>Direct observation of molecular structural change during oxidation in the ground state triggered by stimulated Raman by a 5fs laser</i>
2:20 PM	C	A. Paarmann , M. Lima, R. Chelli, V. V. Volkov, R. Righini, R. J. D. Miller, <i>University of Toronto</i>	<i>Vibrational Excitons in Liquid Formamide</i>
2:40 PM	C	David A. Turton and Klaas Wynne , <i>University of Strathclyde</i>	<i>Ultrafast cage rattling and TA "phonon" modes in atomic and molecular liquids: implications for glass formation</i>
5:30 PM		<i>Excursion and Banquet</i>	

Thursday, May 14, 2009

7:30 AM		<i>Breakfast</i>	
9:00 AM		<i>Peptides and Proteins</i>	Presiding: Tahei Tahara, <i>RIKEN</i>
9:00 AM	C	Esbén Ravn Andresen and Peter Hamm, <i>Universitat Zurich</i>	<i>Site-specific difference 2D-IR spectroscopy of bacteriorhodopsin</i>
9:20 AM	C	Mariangela Di Donato , L.J.G.W. van Wilderen, Klaas Hellingwerf, Ivo H.M. Van Stokkum, Rienk van Grondelle, Marie Louise Groot, <i>Vrije Universiteit Amsterdam</i>	<i>The proton transfer pathway in Green Fluorescent Proteins studied with femtosecond time resolved Vis/midIR pump-probe spectroscopy and multi-pulse visible spectroscopy</i>
9:40 AM	C	C. Krejtschi, O. Ridderbusch, R. Huang, L. Wu, T.A. Keiderling, K. Hauser , <i>University of Frankfurt</i>	<i>Site-specific folding dynamics of peptides studied by temperature-jump infrared-spectroscopy</i>
10:00 AM	C	Hajime Torii , <i>Shizuoka University</i>	<i>Toward Efficient Time-Domain Calculations of 2D-IR Spectra</i>
10:20 AM	C	van Thor JJ , Ronayne KL, Towrie M, Sage JT, <i>Imperial College London</i>	<i>Balance between ultrafast parallel reactions in the green fluorescent protein has a structural origin</i>
10:40 AM		<i>Break</i>	
11:10 AM		<i>Water at Interfaces</i>	Presiding: Tahei Tahara, <i>RIKEN</i>
11:10 AM	In	Mischa Bonn , <i>FOM-Institute for Atomic and Molecular Physics</i>	<i>Structure and dynamics of interfacial water</i>
11:50 AM	C	I.V. Stiopkin, C. Weeraman, F. Shalhout, A.V. Benderskii , <i>Wayne State University</i>	<i>Vibrational Line Shapes and Ultrafast Orientational Dynamics at the Air/Water Interface</i>
12:10 PM	C	Ali Eftekhari-Bafrooei and Eric Borguet , <i>Temple University</i>	<i>The effect of ordering on the vibrational dynamics of interfacial water</i>
12:30 PM		<i>Lunch</i>	