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GORDON RESEARCH CONFERENCES *frontiers of science*

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Nancy Ryan Gray, Ph.D.

Director

GORDON RESEARCH CONFERENCE

on 2003 Gordon Research Conference on Partial Support of the Photoions:
Photoionizations and Photodetachment

FINAL PROGRESS REPORT

DOE

DE-FE02-03ER15427

The Gordon Research Conference (GRC) on 2004 Gordon Research Conference on Biopolymers was held at Queen's College, Oxford, United Kingdom on 9/21-26/2003. The Conference was well-attended with 57 participants (attendees list attached). The attendees represented the spectrum of endeavor in this field coming from academia, industry, and government laboratories, both U.S. and foreign scientists, senior researchers, young investigators, and students.

In designing the formal speakers program, emphasis was placed on current unpublished research and discussion of the future target areas in this field. There was a conscious effort to stimulate lively discussion about the key issues in the field today. Time for formal presentations was limited in the interest of group discussions. In order that more scientists could communicate their most recent results, poster presentation time was scheduled. Attached is a copy of the formal schedule and speaker program and the poster program. In addition to these formal interactions, "free time" was scheduled to allow informal discussions. Such discussions are fostering new collaborations and joint efforts in the field.

I want to personally thank you for your support of this Conference. As you know, in the interest of promoting the presentation of unpublished and frontier-breaking research, Gordon Research Conferences does not permit publication of meeting proceedings. If you wish any further details, please feel free to contact me. Thank you.

Dr. John HD. Eland
2003 Conference Chair

PHOTOIONS, PHOTOIONIZATION & PHOTODETACH.

Queen's College
Sep 21-26, 2003

| Name | Organization | Participation | Status |
|-----------------------|-------------------------------------------------|-------------------|------------|
| SEPPO O AKSELA | UNIVERSITY OF OULU | Attendee | Registered |
| UWE E BECKER | FRITZ-HABER-INSTITUTE OF THE | Discussion Leader | Registered |
| MAURIZIO BECUCCI | LENS AND DEP. CHEMISTRY - UNIVERSITA DI FIRENZE | Poster Presenter | Registered |
| SUSAN M BELLM | UNIVERSITY OF NOTTINGHAM | Poster Presenter | Registered |
| T M BERNHARDT | FREIE UNIVERSITAET BERLIN | Speaker | Registered |
| MICHAEL SHANE BOWEN | UNIVERSITY OF CALIFORNIA, SAN DIEGO | Poster Presenter | Registered |
| STEPHEN E BRADFORTH | UNIVERSITY OF SOUTHERN CALIFORNIA | Speaker | Registered |
| ARTHUR E BRAGG | UNIVERSITY OF CALIFORNIA, BERKELEY | Poster Presenter | Registered |
| ROBERT E CONTINETTI | UNIV. OF CALIFORNIA, SAN DIEGO | Vice Chair | Registered |
| MARCELLO CORENO | CNR-IMIP | Poster Presenter | Registered |
| PAUL CORKUM | NATIONAL RESEARCH COUNCIL | Speaker | Registered |
| MATTANJAH S DE VRIES | UNIVERSITY OF CALIFORNIA, SANTA BARBARA | Speaker | Registered |
| CAROLINE E DESSENT | UNIVERSITY OF YORK | Attendee | Registered |
| TODD DITMIRE | UNIVERSITY OF TEXAS, AUSTIN | Speaker | Registered |
| REINHARD DOERNER | UNIVERSITY FRANKFURT | Speaker | Registered |
| DANIELLE DOWEK | CNRS | Speaker | Registered |
| VLADIMIR L DRIBINSKI | UNIVERSITY OF SOUTHERN CALIFORNIA | Poster Presenter | Registered |
| JOHN H D ELAND | OXFORD UNIVERSITY | Chair | Registered |
| RAIMUND R FEIFEL | OXFORD UNIVERSITY | Poster Presenter | Registered |
| THOMAS A FIELD | QUEEN'S UNIVERSITY BELFAST | Poster Presenter | Registered |
| INGO FISCHER | UNIVERSITY OF WUERZBURG | Poster Presenter | Registered |
| GUSTAVO A GARCIA | CEA/SPAM | Poster Presenter | Registered |
| OLIVER GESSNER | NATIONAL RESEARCH COUNCIL CANADA | Poster Presenter | Registered |
| ANNA GIARDINI-GUIDONI | ROME UNIVERSITY LA SAPIENZA | Discussion Leader | Registered |
| CARL C HAYDEN | SANDIA NATIONAL LABORATORIES | Speaker | Registered |
| JOHN W HEPBURN | UNIVERSITY OF BRITISH COLUMBIA | Speaker | Registered |
| UWE HERGENHAHN | MAX-PLANCK-INSTITUTE FOR PLASMA PHYSICS | Poster Presenter | Registered |
| DAVID HOLLAND | CLRC | Poster Presenter | Registered |
| HARMUT HOTOP | KAISERSLAUTERN UNIVERSITY | Speaker | Registered |
| TOSHIO IBUKI | KYOTO UNIVERSITY OF EDUCATION | Poster Presenter | Registered |
| OTTMAR JAGUTZKI | UNI FRANKFURT/ROENTDEK | Attendee | Registered |
| JOSE JIMENEZ-MIER | INSTITUTO DE CIENCIAS NUCLEARES, UNAM | Poster Presenter | Registered |
| MARK JOHNSON | YALE UNIVERSITY | Speaker | Registered |
| FUMIHIRO KOIKE | KITASATO UNIVERSITY | Poster Presenter | Registered |
| EDWIN KUKK | OULU UNIVERSITY | Poster Presenter | Registered |
| PASCAL LABLANQUIE | LURE | Poster Presenter | Registered |
| FRANCK LEPINE | FOM / AMOLF | Attendee | Registered |
| ANDREAS AL LINDGREN | LUND UNIVERITY | Poster Presenter | Registered |
| DENNIS W LINDLE | UNIVERSITY OF NEVADA, LAS VEGAS | Speaker | Registered |

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| HANS-PETER LOOCK | QUEEN'S UNIVERSITY | Poster Presenter | Registered |
| ROBERT R LUCCHESI | TEXAS A&M UNIVERSITY | Speaker | Registered |
| RICHARD MABBS | UNIVERSITY OF ARIZONA | Poster Presenter | Registered |
| STEVEN T MANSON | GEORGIA STATE UNIVERSITY | Speaker | Registered |
| THOMAS MOELLER | HASYLAB/DESY | Speaker | Registered |
| PAUL MORIN | SOLEIL | Speaker | Registered |
| KLAUS MULLER-DETHLEFS | UNIVERSITY OF YORK | Speaker | Registered |
| MARGARET M MURNANE | JILA | Speaker | Registered |
| DAN NEUMARK | UNIVERSITY OF CALIFORNIA, BERKELEY | Speaker | Registered |
| HIROMICHI NIIKURA | NATIONAL RESEARCH COUNCIL | Poster Presenter | Registered |
| ANDREAS OSTERWALDER | UC BERKELEY | Poster Presenter | Registered |
| MASSIMILIANO PASQUINI | LENS AND DEP. CHEMISTRY - UNIVERSITA DI FIRENZE | Poster Presenter | Registered |
| FRANCIS J PENENT | CNRS | Poster Presenter | Registered |
| ANNA PILCHER-CLAYTON | OXFORD UNIVERSITY | Attendee | Registered |
| ERWIN D POLIAKOFF | LOUISIANA STATE UNIVERSITY | Discussion Leader | Registered |
| STEPHEN T PRATT | ARGONNE NATIONAL LABORATORY | Discussion Leader | Registered |
| SIMON R PROCTER | UNIVERSITY OF OXFORD | Attendee | Registered |
| IGOR PUGLIESI | THE UNIVERSITY OF YORK | Poster Presenter | Registered |
| KATHARINE L REID | UNIVERSITY OF NOTTINGHAM | Attendee | Registered |
| PATRICK RUPPER | PHYSICAL CHEMISTRY LABORATORY, ETH ZURICH | Poster Presenter | Registered |
| ANDREI SANOV | UNIVERSITY OF ARIZONA | Speaker | Registered |
| ZAMITH SEBASTIEN | AMOLF | Poster Presenter | Registered |
| MICHELE SIGGEL-KING | DARESBUURY LABORATORY | Attendee | Registered |
| JOHN P SIMONS | OXFORD UNIVERSITY | Speaker | Registered |
| TIMOTHY P SOFTLEY | UNIVERSITY OF OXFORD | Speaker | Registered |
| TOSHINORI SUZUKI | RIKEN | Discussion Leader | Registered |
| SVANTE SVENSSON | UPPSALA UNIVERSITY | Discussion Leader | Registered |
| DARRAH THOMAS | OREGON STATE UNIVERSITY | Poster Presenter | Registered |
| XIN TONG | UNIVERSITY OF YORK | Poster Presenter | Registered |
| DAVE TOWNSEND | SUNY STONY BROOK | Poster Presenter | Registered |
| KIYOSHI UEDA | TOHOKKU UNIVERSITY | Speaker | Registered |
| JOACHIM ULLRICH | MAX-PLANCK-INSTITUT FUER KERNPHYSIK | Poster Presenter | Registered |
| EDWARD VLIEN | PHYSICAL CHEMISTRY LABORATORY, ETH ZÜRICH | Discussion Leader | Registered |
| MARC VRAKING | FOM INSTITUTE FO ATOMIC & MOLECULAR PHY | Speaker | Registered |
| JORG MATHIAS WEBER | UNIVERSITAET KARLSRUHE | Poster Presenter | Registered |
| PAUL T WHITESIDE | UNIVERSITY OF NOTTINGHAM | Poster Presenter | Registered |
| KAROLINE WIESNER | UNIVERSITY OF CALIFORNIA AT DAVIS | Poster Presenter | Registered |
| DUNCAN A WILD | MPI FUR BIOPHYSIKALISCHE CHEMIE | Poster Presenter | Registered |
| ROSEMARY L WILSON | UNIVERSITY OF MELBOURNE | Poster Presenter | Registered |
| INGRID WYSONG | EUROPEAN OFFICE OF AEROSPACE RESEARCH & DEVELOPMEN | Attendee | Registered |

Photoions, Photoionization & Photodetachment

September 21-26, 2003

Queen's College
Oxford, UK

Chair: [John H D Eland](#)

Vice Chair: [Robert E Continetti](#)

The conference is now open for [application](#) and registration through this Gordon Research Conferences website. Please register early!

Those who would like to present a poster at the meeting are asked to submit an abstract to the Vice-Chair, Bob Continetti, at rcontinetti@ucsd.edu.

We hope that some bursaries will be available to help students attend the meeting. For more information please contact the Chair (John Eland) at eland@physchem.ox.ac.uk.

SUNDAY

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|-------------------|---------------------------------------------------------------------------------------------------------------------|
| 2:00 pm - 9:00 pm | Arrival and Check-in |
| 6:00 pm | Dinner |
| 7:30 pm - 9:30 pm | New light sources and their applications |
| 7.30 pm - 7.45 pm | Discussion Leader: John H.D. Eland (Oxford) |
| 7:45 pm - 8:30 pm | Paul B. Corkum (NRC Canada) "Attosecond science" |
| 8:30 pm - 9:15 pm | Thomas Mueller (DESY) "Multiple ionization of clusters by intense soft X-rays from a free electron laser" |

MONDAY

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|---------------------|----------------------------------------------------------------------------------------------------------------|
| 7:45 am - 8:30 am | Breakfast |
| 9:00 am - 12:30 pm | High resolution in photoionization and electron attachment |
| 9.00 am - 9.15 am | Discussion Leader: Stephen T. Pratt (ANL) |
| 9:15 am - 10:00 am | John Hepburn (British Columbia) "Photoion pair production; spectroscopy and dynamics" |
| 10:00 am - 10:45 am | Tim .P. Softley (Oxford) "Spectroscopy and control of molecules in high Rydberg states" |
| 10:45 am | Coffee Break |
| 11:00 am - 11:45 pm | Hartmut Hotop (Kaiserslautern) "Resonance and threshold phenomena in low energy electron attachment" |
| 11:45 am - 12.30 pm | Oral poster presentations |
| 12:45 pm | Conference Photo |
| 12:45 pm | Lunch |
| 1:30 pm - 4:00 pm | Free Time |
| 4:00 pm - 6:00 pm | Poster Session 1 |
| 6:00 pm | Dinner |
| 7:30 pm - 9:30 pm | Inner shell photoionization phenomena |
| 7.30 pm - 7.45 pm | Discussion Leader: Svante Svensson (Uppsala) |

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| 7:45 pm - 8:30 pm | Paul Morin (Soleil, Paris) "Femtosecond inner shell dynamics probed by Auger electron - ion coincidences" |
| 8:30 pm - 9:15 pm | Reinhard Doerner (Frankfurt) "Photoelectrons and Auger electrons from fixed-in-space molecules" |
| 9:15 pm | Poster Session 1 (continuation) |

TUESDAY

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|---------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 7:45 am - 8:30 am | Breakfast |
| 9:00 am - 12:30 pm | Photoionisation of biomolecules |
| 9:00 am - 9:15 am | Discussion Leader: Anna Giardini-Guidoni (Rome, La Sapienza) |
| 9:15 am - 10:00 am | John P. Simons (Oxford) "Ion dip spectroscopy of biological molecules in the gas phase" |
| 10:00 am - 10:45 am | Mattanjah S. deVries (Santa Barbara) "Shedding light on individual biomolecular building blocks and their clusters" |
| 10:45 am | Coffee Break |
| 11:00 am - 11:45 am | Klaus Mueller Dethlefs (York) "ZEKE spectroscopy of molecules and clusters of biological interest" |
| 11:45 am - 12:30 pm | Oral poster presentations |
| 12:30 pm | Lunch |
| 1:30 pm - 6:00 pm | Free Time (Posters from Session 1 will be available) |
| 6:00 pm | Dinner |
| 7:30 pm - 9:30 pm | Strong laser fields: fusion and attoseconds |
| 7:30pm - 7:45 pm | Discussion Leader: Joachim Ullrich (Freiburg) |
| 7:45 pm - 8:30 pm | Margaret Murnane (JILA) "Ultrafast coherent EUV generation and its applications in surface science" |
| 8:30 pm - 9:15 pm | Todd Ditmire (Texas) "Nuclear fusion from strong field ionization of clusters" |
| 9:15 pm | Poster Session 1 (continuation) |

WEDNESDAY

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|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 7:45 am - 8:30 am | Breakfast |
| 9:00 am - 12:30 pm | Vector correlations in electron ejection |
| 9:00 am - 9:15 am | Discussion Leader: Erwin Poliakoff (Louisiana State) |
| 9:15 am - 10:00 am | Danielle Dowek (LCAM, Paris) "Vector correlations in dissociative photoionisation" |
| 10:00 am - 10:45 am | Robert R. Lucchese (Texas A&M) "Effects of electron correlation and nuclear motion in molecular photoionisation" |
| 10:45 am | Coffee Break |
| 11:00 am - 11:45 pm | Marc Vrakking (FOM) "Slow photoelectron imaging" |
| 11:45 am - 12:30 pm | Kiyoshi Ueda (Tohoku) "Electron-ion multiple coincidence momentum imaging" |
| 12:30 pm | Lunch |
| 1:30 pm - 4:00 pm | Free Time |
| 4:00 pm - 6:00 pm | Poster Session 2 |
| 6:00 pm | Dinner |
| 7:30 pm - 9:30 pm | Non-dipole effects in ionisation |

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| 7.30 pm - 7.45 pm | Discussion Leader: Uwe Becker (FHI Berlin) |
| 7:45 pm - 8:30 pm | Steve Manson (Georgia State) "Small interaction with large effects on photoabsorption; non-dipole, spin-orbit and others" |
| 8:30 pm - 9:15 pm | Dennis W. Lindle (Nevada) "Non-dipole effects in molecular photoemission" |
| 9.15 pm | Poster Session 2 (continuation) |

THURSDAY

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|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 7:45 am - 8:30 am | Breakfast |
| 9:00 am - 12:30 pm | New techniques and experiments |
| 9.00 am - 9.15 am | Discussion Leader: Toshinori Suzuki (IMS) |
| 9:15 am - 10:00 am | Carl C. Hayden (Sandia) "Femtosecond time-resolved photoelectron-photoion coincidence imaging studies of intramolecular processes" |
| 10:00 am - 10:45 am | Daniel Neumark (Berkeley) "Photodetachment and photoionization of clusters" |
| 10:45 am | Coffee Break |
| 11:00 am - 11:45 pm | Mark Johnson (Yale) "Using photodetachment to study interactions of slow electrons with water networks" |
| 11.45 am - 12.30 pm | Ludger Woeste (F.U. Berlin) "NeNuPo: learning about molecules by teaching lasers to control them" |
| 12:30 pm | Lunch |
| 1:30 pm - 6:00 pm | Free Time. Posters from Session 2 will be available. |
| 6:00 pm | Dinner |
| 7:30 pm - 9:30 pm | Photodetachment in gas and solution |
| 7.30 pm - 7.45 pm | Discussion Leader: Robert Continetti (San Diego) |
| 7:45 pm - 8:30 pm | Andrei Sanov (Arizona) "Photoelectron imaging of molecular cluster anions" |
| 8:30 pm - 9:15 pm | Steve Bradforth (S. California) "Electron photodetachment in solution" |
| 9.15 pm | Business Meeting and EPSRC Poster Prize presentation The posters from session 2 will still be available after the business meeting. |

FRIDAY

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|-------------------|-----------|
| 7:45 am - 8:30 am | Breakfast |
| 9:00 am | Depart |