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6c. ADDRESS (City, State, and ZIP Code) Department of Chemistry Baker Laboratory, Cornell University Ithaca, New York 14853	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER N00014-92-J-1493	
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22a. NAME OF RESPONSIBLE INDIVIDUAL H. D. Abruna		22b. TELEPHONE (Include Area Code) (607) 255-4720	22c. OFFICE SYMBOL

1992 Gordon Research Conference on Physical Electrochemistry

ONR Grant No. N00014-92-J-1493

The Gordon Research Conference on Physical Electrochemistry was held from August 3-7, 1992 at the Colby Sawyer School in New London, New Hampshire. There were approximately sixty participants, including representatives from Denmark, Japan, Great Britain, Spain and France. In addition, about twenty percent of the participants were from industry or government laboratories. Moreover, there was a significant number of young scientists including assistant professors, post-doctoral associates and graduate students. The above mentioned aspects gave the conference a close-knit ambiance, while maintaining a great deal of diversity.

The program combined researchers in the mainstream of electrochemistry, as well as individuals, who, while not electrochemists, work in areas of relevance to the study and understanding of electrochemical phenomena. The choice of speakers represented a combination of established researchers as well as some younger investigators. This mix gave the conference a sense of what is of current relevance as well as what areas will be forthcoming. The main themes covered in the program (a copy of the program is included) were:

1. The use of scanned probe microscopies to the study of electrochemical phenomena with emphasis on STM and AFM.
2. Spectroscopic techniques in the study of electrochemical interfaces with emphasis on synchrotron radiation
3. Theoretical aspects of the structure of water next to surfaces, electron transfer and superconductivity and their relation to electrochemical phenomena
4. Studies on Langmuir-Blodgett and self-assembling monolayers.
5. Recent developments in electrocrystallization and electrosynthesis.

We deliberately chose to have a smaller number (18) of speakers than is typically encountered in most Gordon Research Conferences in order to allow them sufficient time to present and develop a general theme of the research as well as to be able to present their most recent work in detail. This allowed for the presentation and thorough discussion of the most recent work in the above-mentioned areas.

The discussion sessions were the best that I have ever seen in any Gordon Conference. They typically averaged close to one hour per talk and, in some cases, extended well beyond an hour and into the night. The discussions were broad based with many participants being involved.

There was a poster session with approximately 20 contributions. It was generally felt that the posters were of very high quality and that there was ample time for the participants to study and discuss them.

In general, the conferees, felt that this was a very successful and enriching conference that was well worth attending.

GORDON RESEARCH CONFERENCES

(Please TYPE or PRINT)

Physical Electrochemistry

Title of Conference

August 3-7, 1992
Conference Dates

Colby Sawyer School
Host School (Site)

Hector D. Abruna Chair

William E. O'Grady Vice Chair

Monday Morning - 9:00 a.m. to 12:15 p.m.

H.S. White

Discussion Leader

B. Hammers

1. Speaker

Scanned Probe Microscopies: Capabilities and Limitations

Title of Presentation

J. Porter

2. Speaker

Studies of Electrochemical Interfaces with Electron
Tunnelling Techniques

Title of Presentation

3. Speaker

Title of Presentation

Monday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

M. Weaver

4. Speaker

Atomic Structure and Dynamics of Ordered Metal-Solid
Interfaces by STM and IR

Title of Presentation

M. Porter

5. Speaker

Organic Monolayer Films: Structure, Reactivity, STM
and AFM Studies

Title of Presentation

Tuesday Morning - 9:00 a.m. to 12:15 p.m.

L. Blum

Discussion Leader

M. Berkowitz

1. Speaker

Water Next to Metallic Surfaces

Title of Presentation

W. Little

2. Speaker

Superconductivity: A Study from Its Surface

Title of Presentation

3. Speaker

Title of Presentation

Tuesday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

B. Miller

4. Speaker

Electrochemistry of Superconductors

Title of Presentation

A. Kuki

Approaches to Superexchange in Long-Range

Wednesday Morning - 9:00 a.m. to 12:15 p.m.

R. Corn

Discussion Leader

M. Teney

1. Speaker

Surface X-ray Scattering of Electrochemical Interfaces
Title of Presentation

C. Korzeniewski

2. Speaker

Vibrational Spectroscopy at Interfaces
Title of Presentation

3. Speaker

Title of Presentation

Wednesday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

A. Russell

4. Speaker

The use of Synchrotron Radiation in the Far-Infrared in the Study of Electrochemical Interfaces
Title of Presentation

J. Hupp

5. Speaker

Surface Intervalence Reactions at Semiconductor Surfaces
Title of Presentation

Thursday Morning - 9:00 a.m. to 12:15 p.m.

J.S. Facci

Discussion Leader

J. Als-Nielsen

1. Speaker

Studies of L-B Films and Liquid Interfaces with X-ray Synchrotron Radiation
Title of Presentation

M. Fujihira

2. Speaker

Photoinduced Electron Transfer in L-B Films
Title of Presentation

3. Speaker

Title of Presentation

Thursday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

C. Chidsey

4. Speaker

Long-Distance Electron Transfer in Self-Assembling Monolayers at Electrode Surfaces
Title of Presentation

S. Creager

5. Speaker

Redox Chemistry in Mixed Monolayer Films
Title of Presentation

Friday Morning - 9:00 a.m. to 12:00 p.m.

D. Rolison

Discussion Leader

M. Ward

1. Speaker

Electrocrystallization of 1-D Materials
Title of Presentation

P. Pintauro

2. Speaker

Novel Developments in Organic Electrosynthesis
Title of Presentation

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ROOM #
BUS TEL.

GUEST NAMES

DR HECTOR D ABRUNA
CORNELL UNIV.
DEPT OF CHEMISTRY BAKER LAB
ITHACA NY

P 100
607-255-4720
CHAIRMAN
14853-1301

JENS ALS-NIELSEN
RISO NATIONAL LABORATORY
P.O. BOX 49
ROSKILDE
DENMARK

AB 203
45-42371212
SPEAKER
DK-4000

DR BERNARD BEDEN
UNIVERSITE DE POITIERS
LABORATOIRE DE CHIMIE
40 AVE RECTEUR PINEAU
POITIERS
FRANCE

AB 302
3349453625
ATTENDEE
86022

DR MAX BERKOWITZ
UNIVERSITY OF NORTH CAROLINA
DEPT OF CHEMISTRY
CHAPEL HILL NC

AB 213
SPEAKER
27599

RAMESH BHARBWAJ
TEXAS A&M UNIVERSITY
DEPT OF CHEMISTRY
COLLEGE STATION TX

AB 208
409-845-3661
ATTENDEE
77843

DR LESSER BLUM
UNIVERSITY OF PUERTO RICO
PHYSICS DEPT.
P.O. BOX 23343
UPR
PR

AB 205
809-763-3390
ATTENDEE
RIO PIEDRAS
00931-3343

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DR CARLOS R CABRERA UNIVERSITY OF PUERTO RICO DEPT OF CHEMISTRY BOX 23346 RIO PIEDRAS PR 00931	AB 308 809-764-0000* ATTENDEE	
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GUEST NAMES

DR GREG EDENS
PURDUE UNIVERSITY
DEPARTMENT OF CHEMISTRY
1373 BRWN BLDG
W LAFAYETTE IN
USA

AB 110
317-494-5474
ATTENDEE

47906

DR JOHN S FACCI
XEROX CORPORATION
MAIL STOP 114-39D
800 PHILLIPS RD.
WEBSTER N.Y.

AB 201
716-422-6696
SPEAKER

14580

DR PETER W FAGUY
UNIVERSITY OF LOUISVILLE
DEPARTMENT OF CHEMISTRY
LOUISVILLE KY

AB 314
502-588-6550
ATTENDEE

40292

DR KRZYSZTOF FRANASZCZUK
UNIVERSITY OF ILLINOIS
DEPT OF CHEMISTRY
1209 W. CALIFORNIA
URBANA IL

AB 202
217-333-3500
ATTENDEE

61801

DR MASAMICHI FUJIHIRA
TOKYO INST. OF TECHNOLOGY
DEPT. OF BIOMOLECULAR ENG.
4259 NAGATSUTA, MIDORI-KU
YOKOHAMA
JAPAN

AB 112
81459221111
SPEAKER

227

DR XIAOPING GAO
PURDUE UNIVERSITY
DEPARTMENT OF CHEMISTRY
WEST LAFAYETTE, IN

AB 107
317-494-5474
ATTENDEE

47907

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GUEST NAMES

DR ANDREW S LIN
NAVAL RESEARCH LABORATORY
CODE 6170, SURFACE CHEMISTRY
WASHINGTON DC

202-404-8697
ATTENDEE

20375

DR WILLIAM A LITTLE
STANFORD UNIVERSITY
PHYSICS DEPT
STANFORD UNIV.
STANFORD CA

AB 204
415-723-4233
SPEAKER

94305

DR ENCARNACION A LORENZO
UNIVERSIDAD AUTONOMA
DEPT QUIMICA ANALITICA
UNIV. AUTONOMA DE MADRID
MADRID
SPAIN

P 206
91-397-4488
ATTENDEE

28049

DR JAMES MC BREEN
BROOKHAVEN NATIONAL LABORATORY
DAS BLDG 480
UPTON NY

AB 305
516-282-4513
ATTENDEE

11973

DR BARRY MILLER
AT&T BELL LABORATORIES
RM. 1D-350 600 MOUNTAIN AVENUE
P.O. BOX 636
MURRAY HILL NJ

P 301
908-582-6610
SPEAKER

07974-0636

DR ZOLTAN NAGY
ARGONNE NATIONAL LABORATORY
9700 S. CASS AVE
BUILDING 205
ARGONNE IL

P 305
708-251-4355
ATTENDEE

60439

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NAME AND ADDRESS

ROOM #
BUS TEL.

GUEST NAMES

DR ROBERT J NOWAK
OFFICE OF NAVAL RESEARCH
800 N. QUINCY ST.
CODE 1113 ES
ARLINGTON VA

NONRES
703-696-4409
ATTENDEE

22217-5000

DR WILLIAM O'GRADY
NAVAL RESEARCH LABORATORY
CODE 6170
WASHINGTON DC

P 308
202-767-2631
VICE CHR

20375

PETER N PINTAURO
TULANE UNIVERSITY
DEPT OF CHEMICAL ENGINEERING
6823 ST CHARLES AVENUE
NEW ORLEANS LA

P 304
504-865-5872
SPEAKER

70118-5669

DR MARC D PORTER
IOWA STATE UNIVERSITY
DEPT. OF CHEMISTRY
AMES IA

P 302
515-294-6433
SPEAKER

50011

DR JOHN D PORTER
UNIVERSITY OF CALIFORNIA, BERKELEY
DEPT. OF CHEMISTRY
BERKELEY CA
USA

AB 303
510-643-7236
SPEAKER

94720

DR KARL M ROBINSON
NAVAL RESEARCH LAB
CODE 6170
CHEMISTRY DIVISION
WASHINGTON DC

P 303
202-404-8698
ATTENDEE

20375

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NAME AND ADDRESS

ROOM #
BUS TEL.

GUEST NAMES

DR DEBRA R ROLISON
NAVAL RES. LABORATORY
CODE 6170 SURFACE CHEMISTRY BRANCH
4555 OVERLOOK AVE S.W.
WASHINGTON DC

NONRES
202-767-3617
DISC LDR

20375-5000

DR ANDREA E RUSSELL
UNIVERSITY OF LIVERPOOL
DEPT. OF CHEMISTRY
P.O. BOX 147
LIVERPOOL
UK

P 212
051 794 3533
SPEAKER

L69 3BX

DR MICHAEL TONEY
IBM
K33 IBM ALMADEN RESEARCH
650 HARRY RD.
SAN JOSE CA

P 300
408-927-1182
SPEAKER

95120

DR WADE TORNQUIST
EASTERN MICHIGAN UNIVERSITY
CHEMISTRY DEPT
MARK JEFFERSON HALL
YPSILANTI MI

AB 216
313-487-2039
SPEAKER

48197

DR PETR VANYSEK
NORTHERN ILLINOIS UNIVERSITY
DEPT OF CHEMISTRY
DE KALB IL

AB 307
815-753-6876
ATTENDEE

60115

DR MICHAEL D WARD
DEPT OF CHEM. ENG. & MATERIAL SCIENCE
UNIV OF MINNESOTA
421 WASHINGTON AVE S.E.
MINNEAPOLIS MN

AB 214
612-625-3062
SPEAKER

55455

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DR MICHAEL J WEAVER PURDUE UNIVERSITY DEPT. OF CHEMISTRY WEST LAFAYETTE IN	47907	P 306 317-494-5466 SPEAKER	
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DR ANDRZEJ WIECKOWSKI UNIVERSITY OF ILLINOIS DEPT OF CHEMISTRY 1209 W. CALIFORNIA URBANA IL	61801	P 101 217-333-3500- ATTENDEE	Theresa
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TELEPHONE
AREA CODE 401
783-4011
783-3372
FAX 783-7644
BITNET
BCP101@URIACC

TO:

Hector Abruna

Dept. of Chemistry, Baker Lab/Cornell University

Fax #607-255-4137

FROM:

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