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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Rutgers University Piscataway, NJ 08854			8. PERFORMING ORGANIZATION REPORT NUMBER AFOSR-82-0109
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13. ABSTRACT (Maximum 200 words) The conference entitled "Atomic Diffusion on Amorphous and Crystalline Surfaces" was held on April 8-9, 1982 at Rutgers University. Announcements of the conference were sent to national and foreign members in the physical sciences, catalysis and chemical sciences sections of the New York Academy of Sciences. The program went according to schedule except for the inability from the University of Trento, Trento, Italy, was present at the conference and was able to substitute for Prof Isaacson. Dr. DeLorenzi spoke about the use of the molecular dynamics computer simulation technique in determining the role of the exchange mechanism in the cross-channel diffusion of adatoms on the FCC (110) surface. This created lively discussion because of the recent interest in this topic. The conference was attended by scientists from NBS, IBM, Bell Laboratories, Corning Glass Works, NSF, and local universities. The papers were well received and the audience size (approximately 30 participants) enabled an availability of the speakers to all attendees which is not often seen at large conferences. The close interactions between the audience and the invited speakers and the openness of the discussions produced favorable			
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RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

"Atomic Diffusion on Amorphous Crystalline
Surfaces"
(A Conference)

COLLEGE OF ENGINEERING • DEPARTMENT OF CERAMICS
BRETT AND BOWSER ROADS • BUSCH CAMPUS • P. O. BOX 909 • PISCATAWAY • NEW JERSEY 08854 • 201/932 2220

September 21, 1982

Department of the Air Force
Air Force Office of Scientific Research
Electronic and Materials Science
Bolling Air Force Base, DC 20332

Dear Sirs:

Enclosed is the report summarizing the conference which was partially
funded by the Department of the Air Force under grant number
AFOSR-82-0109.

Sincerely yours,

S. H. Garofalini

S. H. Garofalini
Assistant Professor

SHG/gh
Enclosure

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Summary Report

Grant Number AFOSR-82-0109

The conference entitled "Atomic Diffusion on Amorphous and Crystalline Surfaces" was held on April 8-9, 1982 at Rutgers University. Announcements of the conference were sent to national and foreign members in the physical sciences, catalysis, and chemical sciences sections of the New York Academy of Sciences.

The program schedule and the collected abstracts of the invited talks are enclosed. The program went according to schedule except for the inability of one of the speakers, Prof. M. Isaacson, to attend. However, Dr. G. deLorenzi from the University of Trento, Trento, Italy, was present at the conference and was able to substitute for Prof. Isaacson. Dr. deLorenzi spoke about the use of the molecular dynamics computer simulation technique in determining the role of the exchange mechanism in the cross-channel diffusion of adatoms on the FCC(110) surface. This created lively discussion because of the recent interest in this topic.

The conference was attended by scientists from NBS, IBM, Bell Laboratories, Corning Glass Works, NSF, and local universities.

The papers were well received and the audience size (approximately 30 participants) enabled an availability of the speakers to all attendees which is not often seen at large conferences. The close interactions between the audience and the invited speakers and the openness of the discussions produced favorable comments from all participants.

The conference was extremely successful in introducing the Rutgers University community to the techniques available for studying surfaces at the atomic level. An additional result of the conference was the decision within the Department of Ceramics that surface analytical equipment be the highest priority item in equipment procurement.

Conference:
**Atomic Diffusion
on Amorphous and
Crystalline Surfaces**

April 8-9, 1982

Rutgers —

The State University of New Jersey
Department of Ceramics
College of Engineering
Piscataway, New Jersey 08854

PROGRAM

Thursday, April 8, 1982

8:30 - 9:00	Registration
9:00 - 9:15	Introductory Remarks
9:15 - 10:15	Professor G. Ehrlich, University of Illinois, Diffusion on metals — a view on the atomic level
10:15 - 10:45	Coffee break
10:45 - 11:45	Professor R. Gomer, University of Chicago, Surface diffusion by the fluctuation auto-correlation method
11:45 - 1:30	Lunch
1:30 - 2:30	Dr. G. Gilmer, Bell Laboratories, Molecular dynamics studies of the crystal-vapor interface
2:30 - 3:30	Professor U. Landman, Georgia Institute of Technology, Stochastic and dynamic theories of diffusion on perfect and defect lattices
3:30 - 4:00	Coffee Break
4:00 - 5:00	Professor K. Heinemann, Stanford University, Electron beam enhanced epitaxial growth of Si on sapphire: in-situ TEM experimentation
5:00 -	Reception and Dinner

Friday, April 9, 1982

8:30 - 9:30	Professor W. Graham, University of Pennsylvania, Adsorption and diffusion of atoms on single crystal metal surfaces
9:30 - 10:30	Professor M. Isaacson, Cornell University, Direct observation of the diffusion of atoms and holes using scanning transmission electron microscopy
10:30 - 11:00	Coffee break
11:00 - 12:00	Professor S. Garofalini, Rutgers University, Molecular dynamics studies of single atom and small cluster diffusion on glassy surfaces
12:00 - 1:00	Lunch
1:00 -	Tours (optional)

GENERAL INFORMATION

The conference will be held April 8-9, 1982 at the College of Engineering, Busch Campus, Rutgers University, Piscataway, New Jersey (The campus is adjacent to New Brunswick). The location is thirty miles southwest of New York City and is easily accessible by bus, rail, or auto from New York City or Philadelphia.

Housing

Discounted cost for conference attendees has been arranged with the facility listed below. You should make your own reservations and mention the conference.

Ramada Inn, exit 9 New Jersey Turnpike, Route 18, East Brunswick, New Jersey
Phone: (201) 846-1400

Registration Fee

Registration fee is \$65 for the conference (\$40 for students). This includes lunch on both days, the banquet, and a preprint copy of the proceedings. Please return registration card and fee before March 1, 1982. Registration fee on the day of the conference will be \$80.

Registration Card

Please detach here

Please detach and return to:
Professor Stephen H. Garofalini
Department of Ceramics
Rutgers University
P.O. Box 909
Piscataway, New Jersey 08854

Please fill in

Name

Title

Business

Address

Registration Fee: \$65.00 Make check payable to: Department of Ceramics, Rutgers University