

**Report on the IUVSTA Surface Science Division for the Triennium 1998-2001**

Experimental and theoretical research on solid surfaces and interfaces, as well as gas-solid interactions, broadly define the scope of this division. Current emphasis is on electronic, ion, atom, and photon interactions with surfaces and on the structure, electronic properties, and dynamics of surface processes. The latter include surface reactions, diffusion, and catalysis. To be more specific, the following session topics are set for the 11<sup>th</sup> International Conference on Solid Surfaces, to be held in San Francisco 29 October –2 November 2001:

## Topics:

Adsorption at surfaces

Atmospheric adsorption/reactions on aerosols

Catalysis: mechanism and models

Correlated systems

Electronic Structure and excitations

Fundamentals of friction, tribology and adhesion

Fundamentals of oxide surfaces and interfaces

Gas-solid dynamics

Nucleation and growth: atomistic concept

Photochemistry and stimulated processes

Quasacrystal surfaces

Semiconductor growth

Semiconductor surface dynamics

Semiconductor surface structure

Surface and interface structures

Surface diffusion and atomic wetting processes

Surface reactions

Surface science opportunities and new applications

Technique innovations: experiments, theory and simulation

Water/surface interactions

The Division promotes the interest of Surface Science through the participation in the organization of International Conferences, the organization of IUVESTA Workshops, granting of IUVESTA sponsorship to International Meetings on Surface Science.

International Conferences:

The Eighteenth European Conference on Surface Science (ECOSS-18) was held in Vienna, Austria -- 21-24 September 1999.

The Nineteenth European Conference on Surface Science (ECOSS-19) was held in Madrid, Spain -- 5-8 September 2000.

The Twentieth European Conference on Surface Science (ECOSS-20) was held in Krakow, Poland-- 4-7 September 2001.

The Eleventh International Conference on Solid Surfaces (ICSS-11) is held in San Francisco,

United States -- 29 October-2 November 2001.

The ECOSS-conferences are organized on behalf of the European Physical Society and IUVSTA.

The ICSS is part of the triennial congress of IUVSTA. The scientific program of ICSS is set up by an international program committee consisting of, usually, the surface science division committee and a number of surface scientists nominated by the host country but, this time, it is differently organized.

IUVSTA workshops:

Workshop 23:

Gettering Materials: Principles and Uses? Bonassola, Italy, 6-10 June 1999--organizers M. Sancrotti, U. Valbusa and L. Westerberg jointly with IUVSTA Vacuum Science and Vacuum Metallurgy Divisions

Workshop 25:

Gas-Surface Interactions: Electronic Structure, Dynamics and Reactivity? Leibnitz, Austria, 26-29 September, 1999--organizers F. Netzer, K. Rendulic and A. Winkler jointly with IUVSTA Applied Surface Science Divisions

Workshop 26:

Surface Holography and Other Direct Methods, Hong Kong, China, August, 2000--organizers K. Heinz, D. K. Saldin and S. Y. Tong

Workshop 27:

Dynamical Phenomena Related with Electrons at Surfaces, Kushiro, Japan, January, 2001--organizers Y. Murata, A. Okiji, K. Terakura and K. Fukutani

Workshop 28

Ion Beam Techniques for the Analysis of Composition and Structure with Atomic Layer

Resolution, Cosener's House, Abingdon, Oxford 26th - 30<sup>th</sup> June 2000--organizers Paul Bailey,

Dik Boerma, Torgny Gustafsson, Takanori Koshikawa, Dae Wan Moon, John O'Connor, Phil

Woodruff.

Workshop 32:

Gas-Surface Interactions" St. Petersburg, Russian Federation, 25-29 September, 2000, --organized

by A.K. Rebrov

Sponsored meetings:

The Surface Science Division has sponsored four international meetings and workshops.

Committee meetings and contacts:

The Committee met in Birmingham, UK, 2 September 1998; Vienna, Austria, 21 September 1999;

by internet communication, February 2001; Krakow, Poland, September 2001; San Francisco,

USA, 29 October 2001. All information was exchanged by electronic mail to allow participation of

all members, also those not attending the meeting. Reports concerning conferences, workshops,

and divisional meetings are available at the IUVSTA-WWW site.

Committee membership:

Jacques JUPILLE, France

Jurgen KIRSCHNER, Germany

Jihawa LEE, Korea

Anton G. NAUMOVETS, Ukraine

John O'CONNOR, Australia, secretary

Massimo SANCROTTI, Italy

Marek SZYMONSKI, Poland

Peter VARGA, Austria

John H. WEAVER, USA, cochair

Akio YOSHIMORI, Japan, cochair

In summary, the Surface Science Division proposed 6 IUVSTA workshops and they have been successfully organized. The Division approved changes in the SSD statutes by the internet meeting.

Respectfully submitted,

Akio Yoshimori and John H. Weaver,

SSD co-chairs 1998-2001

26 October 2001.