

Symposium Report

Fotociencias 2002

January 28 - February 2, 2002

Universidad de La Habana, CUBA

This was the second symposium of this type, held in Havana, Cuba. The first took place in February 1999 and we hope, together with the organizers, that the series will be continued on a regular basis. The Symposium was wonderfully organized by Elena Vigil and a group of Cuban scientists, who managed to collect most of the Cuban scientists doing work related to the interaction of light with matter.

There were several invited lectures, as follows: *"Electron Transfer Dynamics in Dye Sensitized Solar Cells"* (James Durrant; Imperial College, London), *"Photocatalyzed Reduction of Cr(VI) over TiO₂ in the Presence of Reducing Donors: Mechanistic and Kinetic Evidences"* (Marta Litter; Comisión Nacional de Energía Atómica, Buenos Aires), *"Biological Photoreceptors: Time-Resolved Thermodynamic Parameters Derived from Optoacoustic Measurements"* (Silvia Braslavsky; MPI Strahlenchemie, Mülheim), *"Function of Carotenoids in Artificial Photosynthesis"* (Ana L. Moore; Arizona State University, Tempe), *"Waste Water Treatment by the Photochemically Enhanced Fenton Reaction: Modelling and Optimization using Experimental Design and Artificial Neural Networks"* (Esther Oliveros; Universität Karlsruhe), *"Theoretical Studies of Spectral Hole Burning, Photon Echoes and Single Molecule Spectroscopy"* (Robert J. Silbey; MIT), *"Excimer Lamps – A Decisive Step Forward in Photochemical Technology"* (André Braun; Universität Karlsruhe), *"New Developments on Laser Equipment"* (Luis Ponce; Universidad de la Habana), *"New Solid State Polymeric Dye Lasers"* (Roberto Sastre; Instituto de Ciencia y Tecnología de Polímeros, CSIC, Madrid), and *"Spectroscopy and Photophysics of Dyes Supported onto Solid Matrices"* (Enrique San Román; Instituto de Química de Materiales, Agua y Energía, Buenos Aires).

In addition, there were three Courses on (1) *"New Advances on Water Treatment: Advanced Oxidation Technologies"* presented by Esther Oliveros, Marta Litter, André Braun, and Xavier Doménech (Universidad Autónoma de Barcelona); (2) *"Fotosensitization and Detection of Transient Species"* presented by Enrique San Román, and (3) *"Lasers and their Applications"* presented by Luis Ponce (CICATA-Mexico), Mayo Villagrán (Universidad Autónoma de México), Germán Muñiz (ISPJAE, Havana) and Juana Rassi (Delegación Habana, CITMA).

The Symposium was sponsored by the Faculties of Physics and Chemistry and the Institute of Materials and Reagents, as well as by the newly created Chair on Solar Energy of the Universidad de La Habana, and by Cubasolar and the Cuban Optical Society. Organizations from abroad that endorsed the meeting and encouraged attendance or their members were: the International Union of Photobiology (IUPB), the Centro Latinoamericano de Física (CLAF), the Inter-American Photochemical Society (I-APS), the European Society of Photobiology (ESP), and the International Commission on Optics (ICO). The external financial support of IUPB and CLAF permitted supporting the participation of young researchers from other Ibero-American Countries, such as several from México as well as some from Colombia, Perú, Spain and Chile. The young scientists from these countries as well as from the labs in Cuba presented their contributions as posters in a wide variety of subjects such as ecological questions related to the survival of various algae, tomato photomorphogenesis, sugar cane photosynthesis, development of laser instruments, phototreatment of waste water and of soils, photophysics of and photochemistry with semiconductors, teaching of Photobiology, synthesis and characterization of new near-IR dyes, theoretical calculations of molecules in their excited states, spectroscopic analysis of sugar contaminants, development of solar cells, improvement of solar collectors, photolithography, photodynamic therapy, medical uses of lasers, photoinduced fluorescence in dyes used in medicine, and several other photo-areas.

Attending the two very lively poster sessions it was interesting to realize how creative and conscientious of the needs of their Country our Cuban colleagues are, since many contributions showed application-oriented subjects combined with good basic science. Many of the contributions were the result of joint efforts between the Cuban groups and foreign labs from Mexico (several), Spain, and Britain. The afternoon poster sessions were a good opportunity for the local colleagues to plan future projects with the visiting speakers in areas much needed of development in a Country so well bathed by the Sun and yet so dependent on foreign import of fossil energy sources for the survival of its industry and transport. The foreign speakers had the opportunity of visiting several research centers to learn about their plans, the difficulties of the country and the great optimism of the Cuban

people. We also had the opportunity of drinking mojitos without losing our self-control (we think) while following the rhythm of rumbas, boleros, and calypsos, when visiting the wonderful old Havana.

A third Symposium is already planned for 2005. There was some thinking about alternating and/or complementing these North-Latin-American Symposia with the more established ELAFOT (Encuentro Latinoamericano de Fotoquímica), held regularly every two years in the southern cone of the American continent (so far in Argentina, Brasil, and Chile).

All Countries south of the Rio Grande share a generous sunshine, share the urgent need of developing an independent science linked to and supporting an independent industry, and share the language(s) (Spanish-speaking and Portuguese-speaking researchers can understand each other in that mixture called Portunol). Photosciences should play a decisive role in helping finding the ways of worshipping the Sun, thus replacing in these Countries, at least in part, the oil-worshipping and war-producing economy.

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