



NEWSLETTER

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No. 60 September 1982

The American Society for Photobiology - the First Decade 1972-1982

This year marks the tenth anniversary of ASP. A good comprehensive history of the society, written by Kendrick Smith, can be found in vol. 35 pp. 597-614, May 1982. This article also places the society in perspective to the international committee, the national committee, and the regional groups that began in 1962. The first annual meeting was held in Florida in June of 1973.

To commemorate the last ten years a symposium entitled "Yesterday, Today and Tomorrow" was held at the annual meeting this June in Vancouver, Canada. James Longworth spoke on Theodor Grotthus (178501822), the formulator of the first law of photochemistry - "Radiation must be absorbed to produce an effect." Following this talk an award was presented to Kendrick Smith for the major role in beginning and continuing ASP. Kendrick then gave a brief delivery of the society's history. The third speaker was Harlee Strauss, the congressional science fellow supported by the Society, who discusses research funding and the congressional budget. Finally, Mr. W. G. Hahn, a futurist from the library of congress, spoke on "Science and Technology: A Future Perspective."

Regular society membership now exceeds 1300. 282 members were present at the annual meeting and 229 presentations were made. Since 1962 over 2000 papers have been published in Photochemistry and Photobiology for a total of more than 23,000 pages. Additional growth is expected for the immediate future.

CONGRESSIONAL CORNER - Harlee Strauss

During my 10 months on Capitol Hill, I have learned the fundamentals of the Congressional Budget Process. In this column, I would like to pass on several general observations and then demonstrate them in action with an overview of this year's overall figures for R&D spending. Most of these points were made in my talk at the ASP meeting in Vancouver.

The most important thing to remember about the budget process is: ALL BUDGET DECISIONS ARE POLICY DECISIONS. The issue this year is not only how much, but also: what ought to be federally funded? What is the proper role of the federal government in the support of R&D?

Another major point is that budget decisions represent trade-offs between what are perceived to be the most important programs versus those perceived to be of less important at the current time.

There are two key words here. The first is perceived. Congress is composed of politicians, and politicians deal in perceptions. These perceptions are shaped by the news media, by what they hear from lobbyists and by what they hear from their constituents. This last category includes scientists! History and principles occasionally play a role, but they are not as important as what is currently perceived to be true. An that is the second key word: currently. It is important to recognize that programs are always thought of in the context of current societal conditions. Long range planning is recognized to be important, but it is almost impossible to do under our political system.

I think the Reagan administration has made these points exceedingly clear. The severe cutbacks in social or 'discretionary' spending (why are only the social programs discretionary?) and the enormous increases in defense spending clearly show that budget choices and policy choices are equivalent. This is true down to the level of funding of individual programs.

The last point I want to make is that although the budget process is complex, it is essential to understand it in order to have any effective input into the process, both in setting funding levels and setting priorities. In the next issue of the Newsletter I will report on the R&D budget for next year.

History - Switched on Godalming - J. W. Longworth

In early November 1881, the small Surrey town of Godalming, some 33 miles southwest of London, became the first community with piped electricity for street and indoor illumination. It replaced gas lamps.

Incandescent lighting devices were explored by the chemist Joseph Swan in 1860 in Newcastle. He needed a convenient source of lighting in his work on improving upon the wet photographic glass plates devised by the sculptor Scott Archer (1851). Swan passed electric current through a thin fiber of carbon which had been created by pyrolyzing wood fiber (paper). The carbon fiber was enclosed in an evacuated envelope, but rapidly oxidized. Vacuum was created by a water ejector pump, but the magnitude obtainable was insufficient to prevent destruction of the filament within minutes. Many years later Swan learned from William Crookes of an improved pump which Crookes used in his own investigations of electrical discharges in low pressure gases. This was a mercury jet-ejector pump devised by Hermann Sprengel in 1865 at Gottingen. The design was such that it could be automated. By 1878 Joseph Swan could obtain practical devices that would last for many days, and he exhibited them at a meeting of the Chemical Society in Newcastle in November 1878. A local engineer and industrialist, William Armstrong, was so attracted by them that he lit his own home, Craggside near Newcastle, with Swan filament lamps. He generated electricity with a water wheel from a stream on his estate for Christmas 1879. By 1881 Swan was able to offer his lamps commercially.

The electric arc had been available for years (devised for a demonstration lecture by Humphrey Davy at the Royal Institution in 1808). After the commercial production of multipolar high-voltage DC current-generators by Zenobe Gramme in Paris in 1871, carbon arc lamps became widely used throughout Paris for illuminating individual sites, indoor and out. Their use came much later to London, and only a few locations in the city were lighted by the end of 1878. The town of Godalming had a contract for gas lighting, renewable by the end of September 1881, and the gas company proposed a substantial increase. The city worthies declined the contract and within a week had viewed a demonstration of electric lighting from the London firm of Calder & Barrett and had placed a contract with them for lighting the community. Council decisions were rapid in those years.

The electric generator was initially water driven and located in a mill. It operated a few arc lamps and several Swan filament lamps. A steam driven generator replaced the water mill in a few months, and later the contract was taken over by Siemens.

Godalming lit its streets electrically for three years, but it returned to gas lighting in May 1884. Now the gas company offered a much reduced rate.

Where is Edison! Well, that is another story but it is one that parallels this though many months later. The difference is that Thomas Edison envisioned an industry; and, rather than light a small market town, he devised the means to illuminate a city and soon had purchased Swan's lamp company and was supplying light to London in January 1882 and to New York in September, a year after Godalming.

Biological Physics Prize - 1983

Sponsored by friends of the Biological Physics Division of the American Physical Society including Spectra-Physics Corporation and Boehringer-Mannheim Biochemicals Corporation.

Purpose - To recognize and encourage outstanding achievement in biological physics research.

Nature - The prize consists of \$3,000, an allowance for travel to the meeting at which the prize is awarded, and a certificate citing the contributions made by the recipient(s).

Establishment and Support - This prize was established in 1981 by friends of the Biological Physics Division.

Rules and Eligibility - Nominations are open to scientists of all nationalities regardless of the geographical site at which the work was done. The prize may be awarded to more than one investigator on a shared basis.

Send name of proposed candidate and supporting information before 15 October 1982 to: Britton Chance, University of Pennsylvania, Johnson Foundation G4, Richards Medical Building, Philadelphia, PA 19104.

NEW BOOKS

Topics in Photosynthesis - volume 4 - "Electron Transport and Photophosphorylation" edited by J. Barber is available from Elsevier Biomedical Press, 52 Vanderbilt Ave., New York, NY 10017.

Light Reaction Path of Photosynthesis, edited by F. K. Fong, is available from Springer-Verlag, 175 Fifth Ave., New York, NY 10010.

The Blue Light Syndrome, edited by H. Senger, is available from Springer-Verlag, 175 Fifth Ave., New York, NY 10010.

Plants and the Daylight Spectrum. Ed. by H. Smith. Proceedings of the 1st International Symposium of the British Photobiology Soc., Leicester, 5-8 Jan. 1981. London : Academic Press 1981.

Proceedings of the 1981 International Conference on Luminescence. Berlin, July 20-24, 1981. Ed. by I. Broser, H.-E. Gumlich, R. Broser. Amsterdam : North-Holland Publ. 1981.

Trends in Photobiology. Ed. by C. Helene, M. Charlier, Th. Montenay-Garestier and G. Laustriat. Proceedings of the 8th International Congress on Photobiology and of the Colloque International du CNRS on "Les Effets Biologiques et la Bioconversion du Rayonnement Solaire" held July 20-25, 1980 in Strasbourg, France. New York : Plenum Press 1982. XIII, 673 S.

MEETINGS

1983

January 5-10 INTERNATIONAL CONFERENCE ON PHOTOCHEMISTRY AND PHOTOBIOLOGY, Alexandria, Egypt. Information: Prof. Dr. El-Sadr, UNARC, University of Alexandria, Horreya Avenue, P.O. Box 832, Alexandria, Egypt.

February SECOND INFORMAL BRAZILIAN MEETING ON PHOTOCHEMISTRY AND PHOTOBIOLOGY, Sao Paulo, Brazil. Information: Prof. Vicente Toscano, Universidade de Sao Paulo.

June 26-30 AMERICAN SOCIETY FOR PHOTOBIOLOGY MEETING, Madison, Wisconsin. Information: Amer. Soc. Photobiology, 4720 Montgomery Lane, Suite 506, Bethesda, Maryland 20014 U.S.A.

July 3-8 7TH INTERNATIONAL CONGRESS OF RADIATION RESEARCH, Amsterdam, Netherlands. Information: J. J. Broerse, Secretary General 7th International Congress of Radiation Research, c/o Radiobiological Institute TNO, P.O. Box 5815, 2280 HV Rijswijk, The Netherlands.

1984

March 1-3 PHOTOBIOLOGIC, TOXICOLOGIC, PHARMACOLOGIC, AND THERAPEUTIC ASPECTS OF PSORALENS, National Institutes of Environmental Health Sciences, Research Triangle Park, NC, U.S.A. Information: Dr. Madhu A. Pathak, Department of Dermatology, Harvard Medical School, Massachusetts General Hospital, Boston, MA, 02114, U.S.A. (617-726-3996) or Dr. June K. Dunnick, National Toxicology Program, NIEHS, Research Triangle Park, NC, 27709, U.S.A. (919-541-4811).

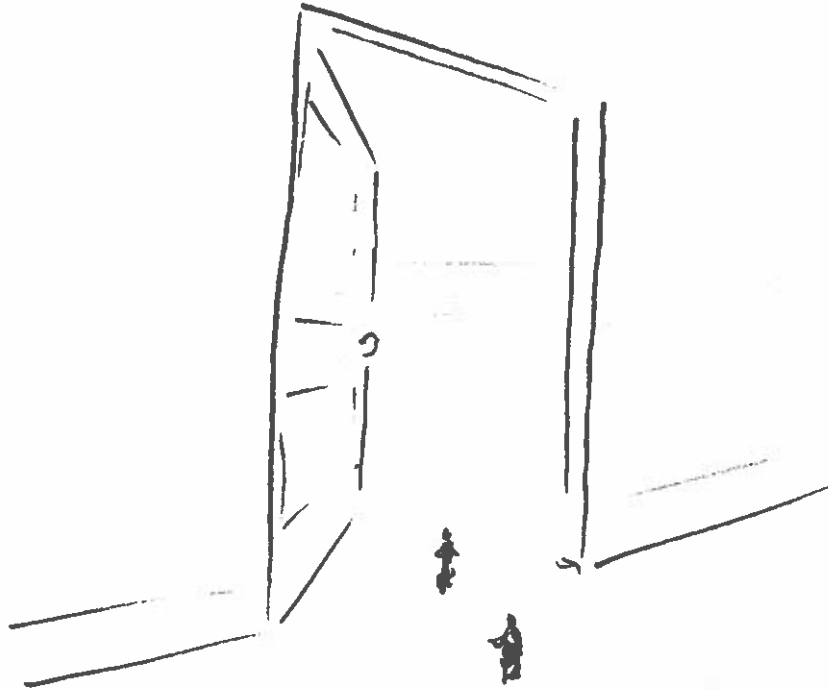
Week of July 4th INTERNATIONAL PHOTOBIOLOGY CONGRESS 1984, Philadelphia, Penns., U.S.A.

PERSONAL ITEM

Dr. Robert M. Sayre, Director of Plough, Inc. Photobiology Laboratories, was seriously injured in an automobile accident in Memphis on July 19th. Bob has undergone reconstructive surgery of the face and right leg and faces additional surgery on his left leg. A long recovery period is anticipated. Cards should be addressed to Bob at 8621 Loxley Fairway, Cordova, TN 38018, or he can be reached at (901)388-2065 after August 15th.

The Society wishes Bob a speedy and complete recovery.

CARTOON - by Ralph A. Lewin



R.A.L.

"DR KLEINSCHMIDT, I'D LIKE YOU TO MEET
MICRO-EINSTEIN."

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