

2012 Medal Winners | français

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PRESS RELEASE / FOR IMMEDIATE RELEASE

## *The 2012 CAP-INO Medal for Outstanding Achievement in Applied Photonics*

is awarded to

### **Dr. Andreas Mandelis**

The Canadian Association of Physicists (CAP) and the Institut National d'Optique (INO) are pleased to announce that the 2012 CAP-INO Medal for Outstanding Achievement in Applied Photonics is awarded to Dr. Andreas Mandelis, University of Toronto, his seminal contributions to the field of photothermal and photoacoustic science and applications.

Dr. Andreas Mandelis is one of the most remarkable and accomplished researchers in Canada. His 305 publications are an imposing record of achievement. He is a Fellow of the Royal Society of Canada, a Fellow of the American Physical Society, and a fellow of the S.P.I.E. He is renowned in the areas of applied photonics, imaging, applications of lasers in optoelectronics, materials science and biophotonics; in particular, he is a pioneer in the development and shaping of diffusion-wave, photothermal and photoacoustic sciences and associated technologies.

His work has ranged from the eminently practical, as in the examination of dental cavities, to the profoundly theoretical. As one of the supporters of this nomination writes, "Perhaps the work I have found to be the most creative and which impresses me the most with its depth is his J. Math Phys. paper [J. Math. Phys. 26, 2676 (1985)], where he formulated theory for the fundamental character of thermal waves. In this paper he gave elegant derivations of a Hamilton-Jacobi formulation of thermal wave physics, a thermal wave equivalent of Planck's constant, a thermal wave Schrödinger equation, an uncertainty



principle for thermal waves, and the thermal wave equivalent of Ehrenfest's theorems. The concepts embodied in these thermal wave properties are analogues of what every physicist has studied in their graduate course work, except that the fields where these ideas were originally applied are classical mechanics and quantum mechanics."

An exemplary entrepreneur, Dr. Mandelis has founded several companies, basing their products on patents resulting from his research.

The CAP-INO Medal for Achievement in Photonics was first awarded in 1998 and has been awarded biennially since. The recipient is invited to give a plenary lecture at the CAP Congress held in June during the year of their award.

Prof. Mandelis will be presented with the 2012 CAP-INO Medal for Outstanding Achievement in Applied Photonics at the 2012 CAP Congress (hosted by the University of Calgary in Calgary, Alberta, from June 11-15) at the end of his plenary talk and will be honored during the Congress banquet to be held on Thursday, June 14th, 2012. Please refer to the Congress program for the schedule of plenary talks by CAP medal winners.

The Canadian Association of Physicists, founded in 1945, is a professional association representing over 1600 individual physicists and physics students in Canada, the U.S. and overseas, as well as a number of Corporate, Institutional, and Departmental Members. In addition to its learned activities, the CAP also undertakes a number of activities intended to encourage students to pursue a career in physics.

INO is a private, non-profit R & D corporation founded in 1985 and employing, at its facilities in Sainte-Foy, Québec, over 140 people, including some eighty researchers specialized in the various branches of photonics. To be an international leader in optics and photonics R&D, INO promotes economic expansion in the country by providing assistance to companies seeking to be more competitive.

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