

# Brain Activity Mapping Project: Applying Advances in Nanoscience and Nanotechnology to Neuroscience

**E**xcitement has been building as a group of nanoscientists and neuroscientists have collaborated to propose leveraging advances in nanoscience to advance dynamic studies of the brain.<sup>1–4</sup> In this issue, we publish a Nano Focus article in which much of this group has gotten together to lay out the challenges and opportunities ahead. We look forward to publishing many of the advances in this field as the project moves forward.

Two of the authors of this month's Nano Focus article, Profs. Ed Boyden and Karl Deisseroth, are being honored along with four others with the Brain Prize from the Grete Lundbeck European Brain Research Foundation.<sup>5</sup> This prize has been awarded for their contributions to the development of optogenetics, which is one of the techniques that shows promise for brain activity mapping and many other applications.

We also congratulate two of our editors this month. Prof. C. Grant Willson has won the Japan Prize with Prof. Jean M. J. Fréchet for developing chemically amplified resist polymers that are now used around the world for semiconductor manufacturing.<sup>6</sup> Prof. Warren Chan has been awarded the E. W. R. Steacie Memorial Fellowship of the Natural Sciences and Engineering Research

Council of Canada for highly promising faculty in science and engineering at Canadian universities.<sup>7</sup>

Finally, we have been asked by the National Cancer Institute of the National Institutes of Health to solicit comments on their behalf on nanotechnology approaches to cancer diagnosis and treatment. A Web site for comments has been set up for this purpose.<sup>8</sup>

*Disclosure:* Views expressed in this editorial are those of the authors and not necessarily the views of the ACS.



PHOTO COURTESY OF INBAL GOSHEN AND KARL DEISSEROTH, STANFORD UNIVERSITY/HMMI

A freely moving mouse with light delivered to the brain by fiber optics for optogenetic control of targeted neurons expressing microbial proteins.<sup>1</sup>



PHOTO COURTESY OF THE COCKRELL SCHOOL

Prof. C. Grant Willson has been awarded the Japan Prize for developing chemically amplified resists.<sup>7</sup>

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Editor-in-Chief

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