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The 15th Anniversary of the U.S. National Nanotechnology Initiative




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### Authors

Chan, Warren CW

Chhowalla, Manish

Farokhzad, Omid

et al.



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EDITORIAL

# The 15th Anniversary of the U.S. National Nanotechnology Initiative

Next month, we celebrate the signing of the "21st Century Nanotechnology Research and Development Act," which took place at the White House on December 3, 2003 and established and funded the National Nanotechnology Initiative (NNI) in the United States.[1] The NNI catalyzed global efforts in nanoscience and nanotechnology that continue to this day[2,3] and that we have the honor and pleasure of reporting and encouraging on these pages in *ACS Nano*.

On this anniversary, we ask you, our readers, authors, advisors, and supporters, to reach out to your neighbors and friends as well as to your local, regional, and national government leaders to let them know what we are doing for the world and how we are targeting critical problems in energy, food, medicine, safety, security, sustainability, transportation, water, and other areas using nanoscience and nanotechnology. Key feedback that we have received around the world is that since the products of our work are not visible, both literally and figuratively, we are not getting the attention that will be required to get the support needed to continue our research, advances, and development.[4] Part of our job outside the laboratory is to share what we are doing with the public, who pay for these efforts, and with the decision makers who act on behalf of those they represent. We lag behind many other fields in this activism, in part because of the youth of our enterprise and in part because we are not organized the way that most traditional disciplines are. Thus, we must also reach out to and through our supporting scientific, engineering, medical, academic, industrial, and other communities to their support of our efforts.

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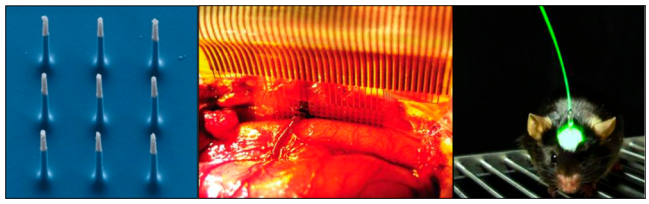
As we have demonstrated, nanoscience and nanotechnology also have special roles to play in "adjacent" areas of science and technology. This impact comes about in part because of how our field developed, bringing together scientists, engineers, clinicians, and others to merge efforts, approaches, and goals and to develop needed tools to tackle critical problems at the nanoscale and beyond. We see the results not only in discovering new materials and properties, but in pulling together teams to propose and to carry out initiatives to understand, for example, the brain, the microbiome, cancer, and the immune system.[5−7] Moreover, we are pursuing these objectives and environmental implications by considering the safety of the cutting-edge technology developed and the impact on sustainability at all levels of nanomaterials applications. Expect even broader impact as the special communication and collaboration skills that we have developed are brought to bear on an increasingly diverse set of problems. We will catalyze, support, and promote these efforts with your help. You will see our efforts at *ACS Nano* in this regard expanding in the coming months and we hope that you will join our international effort.



**New nanotechnology tools are applied and have impact across a wide variety of fields. The communication skills developed through nanoscience and nanotechnology are playing key roles in articulating and addressing critical problems in many fields. Reprinted from ref 5. Copyright 2013 American Chemical Society.**

While we are still testing, comparing, and arguing over different approaches to nanoscience and nanotechnology education,[8] our efforts to train our students and ourselves across disciplines has already paid off handsomely. The proofs are in both the advances that we have made and in the problems that we identified as addressable once suitable technologies are developed and applied.[2,3] Discoveries of properties unique to the nanoscale are also giving us new opportunities to share and to excite the next generations of students, scientists, and engineers through outreach and educational activities. We look forward to working with you on expanding this set of problems and telling the world what we are doing.

**Warren C. W. Chan**, Associate Editor

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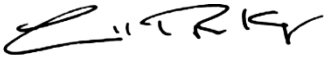

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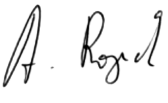

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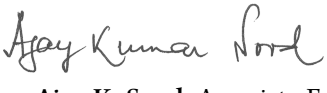

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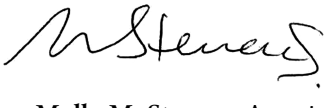

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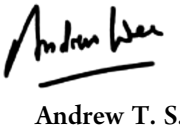

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## AUTHOR INFORMATION


### Corresponding Author

*E-mail: editor@nano.ucla.edu.

### ORCID

Warren C. W. Chan: 0000-0001-5435-4785
Manish Chhowalla: 0000-0002-8183-4044
Omid Farokhzad: 0000-0003-2009-270X
Sharon Glotzer: 0000-0002-7197-0085
Yury Gogotsi: 0000-0001-9423-4032
Paula T. Hammond: 0000-0002-9835-192X
Mark C. Hersam: 0000-0003-4120-1426
Ali Javey: 0000-0001-7214-7931
Cherie R. Kagan: 0000-0001-6540-2009
Kazunori Kataoka: 0000-0002-8591-413X
Ali Khademhosseini: 0000-0001-6322-8852
Nicholas A. Kotov: 0000-0002-6864-5804
Shuit-Tong Lee: 0000-0003-1238-9802
Young Hee Lee: 0000-0001-7403-8157
Yan Li: 0000-0002-3828-8340
Jill E. Millstone: 0000-0002-9499-5744
Paul Mulvaney: 0000-0002-8007-3247
Andre E. Nel: 0000-0002-5232-4686
Peter J. Nordlander: 0000-0002-1633-2937
Wolfgang J. Parak: 0000-0003-1672-6650
Reginald M. Penner: 0000-0003-2831-3028
Andrey L. Rogach: 0000-0002-8263-8141
Raymond E. Schaak: 0000-0002-7468-8181
Ajay K. Sood: 0000-0002-8652-1389
Molly M. Stevens: 0000-0002-7335-266X
Andrew T. S. Wee: 0000-0002-5828-4312
Tanja Weil: 0000-0002-5906-7205
C. Grant Willson: 0000-0002-2072-3981
Paul S. Weiss: 0000-0001-5527-6248


### Notes

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

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