Aiming High

One of the themes that has run through the first four Conversations that we have published, including the one in this issue, is how one chooses high-impact research problems in nanoscience.[1–4] Choosing important problems, changing fields, and making oneself uncomfortable in unfamiliar surroundings have come up again and again.

One aspect of tilting the odds to favor breakthroughs is to work in unexplored territory. While Louis Pasteur is often quoted as saying, "Chance favors the prepared mind", real advances are not *just* a matter of chance, but much more dependent on deliberate strategic decisions to look where there is a significant chance of finding something important. As George Whitesides put it, "Where is there something that really might be revolutionary?"[2] Once there, preparedness, careful observation, and luck are much more likely to play a role.

Sometimes explicitly in our Conversations, and even more frequently offline, we discussed the roles of serendipity. While science is often published as a deliberate series of steps, this is often not the way that it was performed.[5] Through Perspectives, Conversations, and Nano Focus articles, we will try to shed light on this both retrospectively and prospectively.

New tools and methods open up new frontiers, as we have seen with the advent of scanning probes in nanoscience and all the advances that have led to and fuel the biotechnology revolution. What is next in nanoscience? What is it that we cannot yet measure that would open up new worlds to us? Look for more discussions of this fascinating topic as well as some of these advances in our upcoming issues.

In this issue, I talk to Dr. Masakazu Aono of the National Institute for Materials Science (NIMS) about a series of nanoscience centers that he has run, beginning with the Aono Atomcraft Project, the world's first center devoted to nanoscience and nanomanipulation.[4] This fall, two international centers were created with very substantial long-term support from the Japanese government with the idea of enabling and creating breakthroughs in nanoscience and nanomaterials. Dr. Aono heads the center based at NIMS in Tsukuba, Japan. I am privileged to be a part of the center at Tohoku University. The creation of both centers and the 10–15-year commitment to support them explicitly acknowledge the idea that we can aim high and move into unexplored territory with a talented world-class team. The people associated with these centers also hope to train a new generation of young scientists in *how* to do this.

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As Louis Pasteur also said, "Science knows no country, because knowledge belongs to humanity, and is the torch that illuminates the world." Let us hope that in the coming year and years, nanoscience and nanotechnology can help with the issues we face as one world. Here at *ACS Nano*, we will do our part to point you to opportunities and strategies, and we look forward to reporting your progress and successes.

Finally, let me take this time to thank all the authors and reviewers, and the ACS and journal staff who have gotten us off to such a quick and promising start. In fact, we are pleased to announce that after just four issues *ACS Nano* will now be indexed in Thomson Scientific, which includes the Science Citation Index, the Chemistry Citation Index, and the Material Science Citation Index. I owe a special debt of gratitude to the editors of *ACS Nano*: Associate Editors Dawn Bonnell, Paula Hammond, and C. Grant Willson, Managing Editor Penelope Lewis, and Senior Acquisitions Editor Sarah Tegen. In the coming year, please expect more great science and visionary looks at what is coming to our exciting, lively, and vigorous field.

Paul S. Weiss
Editor-in-Chief

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