THE 2010 FLC MID-CONTINENT REGION ANNUAL AWARDS SAND2010-4757P

Nomination Form

Please note the specific criteria for the nominated award.

I nominate the following individual, technology, or organization for the following award (please √):

- ❑ Regional Laboratory Award
- ❑ Representative of the Year Award
- ❑ Notable Technology Development Award
- ❑ **Regional Partnership Award**
- ❑ STEM Mentorship Award (New Category!)
- ❑ Excellence in Technology Transfer

Nomination submitted by: Jackie Kerby Moore
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Nominee's Name: Regan Stinnett, NINE Program Manager
Affiliation: Sandia National Laboratories
Laboratory Director/CEO or Point of Contact: Paul Hommert T#/email: 505-844-8789, pjhomme@sandia.gov

Basis for the nomination. Summarize in space below. Up to two additional pages of written justification may be appended. Total nomination should not exceed **two pages**, Times 12 pt, 1 ½ line spaced. Artwork, photographs are ***strongly*** encouraged and are not included in the page count.

NINE, *THE NATIONAL INSTITUTE FOR NANO ENGINEERING*

Basis for Nomination—Regional Partnership Award

NINE is a public-private partnership (government/university/industry collaboration) formed to develop the next generation of innovation leaders for the U.S. by involving students – ranging from undergraduates to Ph.D. candidates – in large-scale, multi-disciplinary research projects focused on developing nano-engineering enabled solutions to important national problems. NINE addresses a growing national concern: America's science and engineering education and innovation engine is in danger. The 2007 America COMPETES Act provided a national strategy to address this concern. In accordance with this strategy, Sandia established NINE as a national innovation hub for the rapidly developing field of nano-engineering. Since its birth, NINE has become a model novel partnership with universities and companies throughout the nation and the Department of Energy (DOE), with Sandia as the host lab.

NINE, the only such program in the U.S., is designed to meet all of its partners' needs.

- **Sandia, DOE, and the nation:** Provide innovative nano-engineering solutions to Labs' mission R&D focus areas such as national security problems related to energy and economic security, defense, and workforce development.
- **Universities, their students and faculty:** Provide exciting, real-life and large-scale nano-engineering research opportunities for students and faculty, and access to top research facilities and nationally recognized scientists and engineers.
- **U.S. Industry:** Provide financial leverage for innovative pre-competitive nano-engineering research, intellectual property in key areas, and access to vetted new hires.

During the past year NINE has developed a formal structure for contractual agreements involving its university and industry partners which ensures continuing funding; has completed an industry/Sandia co-selection of strategic research projects to be undertaken during the next several years; has recorded record numbers of student participants in its year-round and summer programs; has initiated an enhanced collaboration with the National Science Foundation that has brought 10 NSF-supported students to Sandia for the summer; and has won the "Deal of Distinction" award from the Licensing Executives Society (U. S. and Canada), Inc.

NINE – Preparing the U.S. for the Future

By Partnering for Workforce Development and Innovation Because the World has Changed

The National Institute for Nano Engineering (NINE) can truly be called a radically different type of science education/technology transfer initiative that, just about three years after its birth, is positioning the U.S. to accelerate innovation by involving an impressive collection of U. S. students in the study of nano-engineering technology, focusing its research on key DOE initiatives, and forging a unique partnership with an impressive roster of industry and academia members.

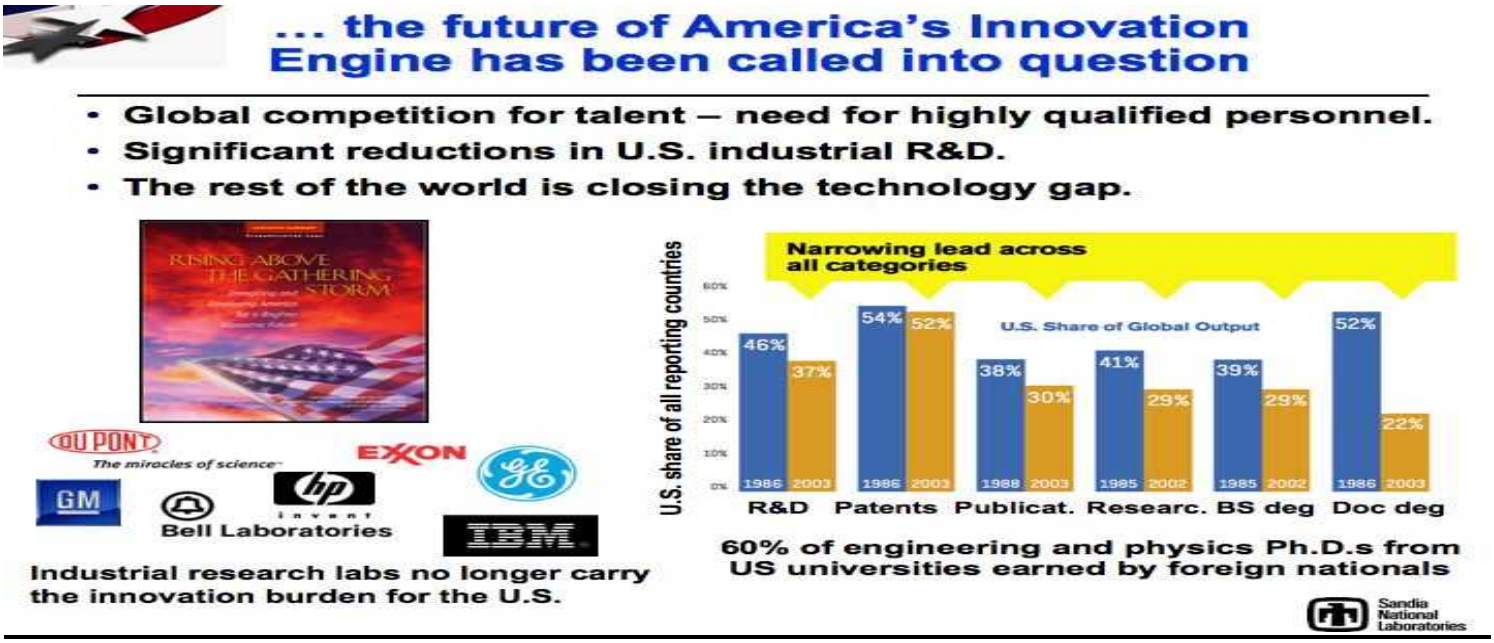
NINE's roster of industry partners includes Intel, ExxonMobil, and Goodyear as full partners together with other companies who have worked with Sandia to create the NINE concept. Universities that have been involved include Harvard, Harvey Mudd, MIT, Notre Dame, Rice, Rensselaer Polytechnic, Yale and the universities of California-Davis, Florida, Illinois, New Mexico, Texas-Austin, and Wisconsin.

America's pipeline of science and engineering students that fuels our education and innovation engine is in danger of running dry. NINE is developing our next generation of innovative leaders by involving students in large-scale, multi-disciplinary research projects focused on developing nanotechnology solutions to national problems. NINE was established as a national innovation hub in the exciting, rapidly developing field of nano-engineering — a novel partnership among universities and companies throughout the nation with the Department of Energy (DOE) through Sandia as the host laboratory for NINE.

NINE's highly collaborative environment matches students with Sandia and industry mentors and university faculty. It capitalizes on DOE's micro/nano R&D equipment and facilities at Sandia and at partners' sites, such as the Labs' Microsystems & Engineering Sciences Applications (MESA) and Center for Integrated Nanotechnologies (CINT) facilities. Graduate students' thesis projects are focused on topics of interest within the NINE research program. Industry partners participate in NINE activities, provide summer internships for students, co-fund research projects, and receive rights to intellectual property resulting from NINE projects. University partners, nationally recognized leaders in nano-engineering research, participate in NINE activities, respond to NINE proposal calls, and provide students and faculty to participate in NINE projects. Sandia contributes its infrastructure base, expertise, and mentors, and helps to identify projects that are strategic to the nation and synergistic with Sandia's strengths. Top students, faculty, and industry researchers collaborate with Sandia, contribute to its knowledge base, and become partners through their NINE projects.

Motivating top undergraduates to obtain advanced degrees is a NINE priority. It supports the selection of promising undergraduates by NINE faculty to participate with graduate students in projects at their university during the academic year. These undergraduates also have opportunities for summer internships in industry or at Sandia.

Technology Innovation Drives Global Leadership and Economic Prosperity, But…



Among myriad accomplishments for NINE during the past 12 months is Sandia's selection of the Semiconductor Research Corporation (SRC) to manage the administrative and partnership activities of NINE through creation of NINECO, a legal 501.c.6 entity. On the heels of NINECO's establishment, Sandia and SRC were jointly honored with the "Deal of Distinction" presented by the Licensing Executives Society (U.S. and Canada), Inc.'s. (See LES news release immediately below.)

Licensing Executives Society (U.S.A. and Canada), Inc.

Licensing Executives Society Announces
2009 Deals of Distinction™ Awards

SAN FRANCISCO, OCTOBER 21, 2009 – Intellectual property (IP) development and the licensing of IP is an essential component of innovation in our knowledge-based economy. Each year, major IP deals between companies help drive innovation and ensure that new products continue to reach businesses and consumers.

To highlight the best of these deals, the Licensing Executives Society (USA & Canada), Inc. (LES) today presented its Deals of Distinction™ Awards to winners in five industry sectors. The awards were given at the LES Annual Meeting in San Francisco, California.

"Now more than ever, our economy needs intellectual property and the innovation in products and services that IP helps to achieve," said Rimma Driscoll, chair of the LES Deals of Distinction Award Committee. "We are proud to recognize these winning deals, because they are making a real difference."

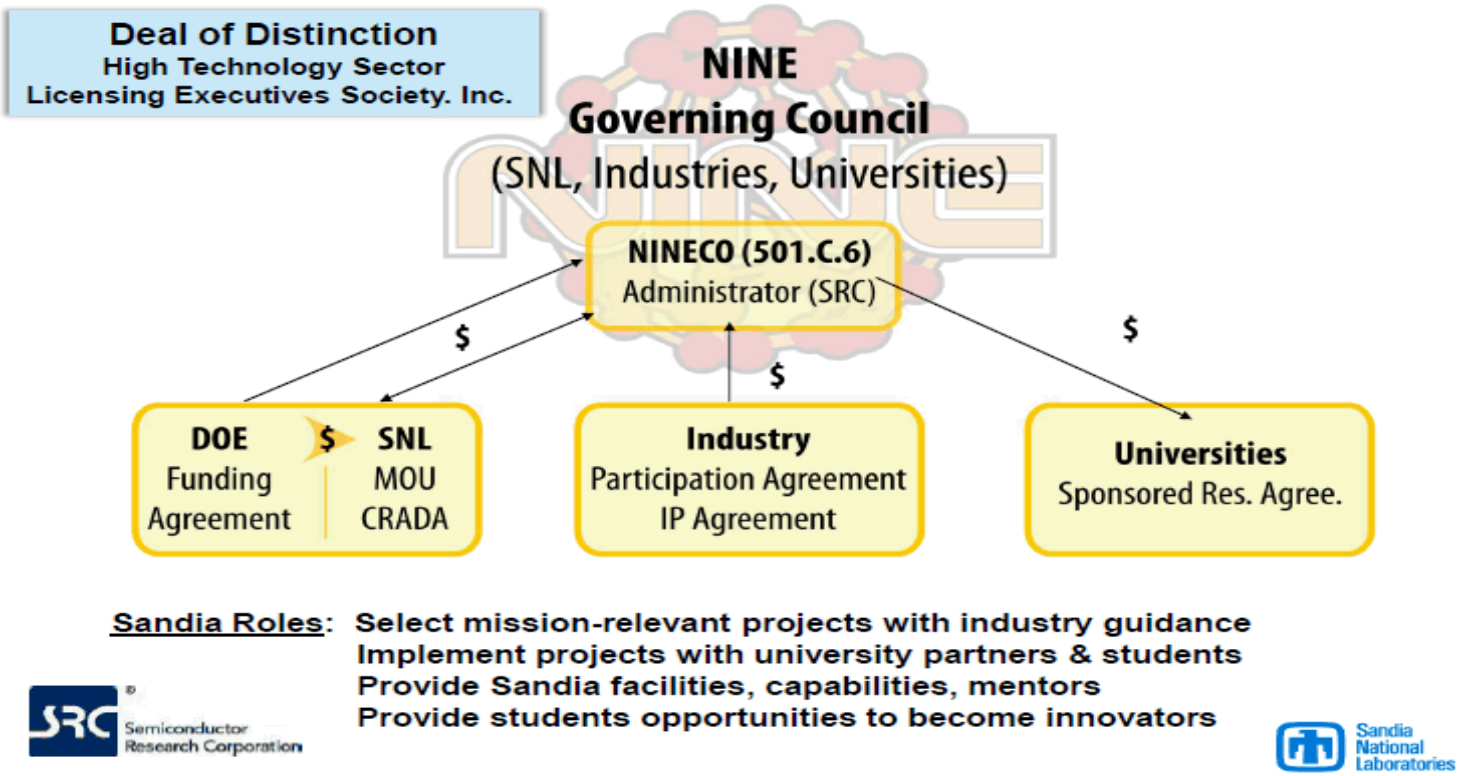
….

High Technology Sector:
SRC and Sandia National Labs

Sandia National Laboratories, which began an innovative approach called the National Institute for Nano-Engineering (NINE) to facilitate the education of students and improve U.S. competitiveness, partnered with Semiconductor Research Corporation (SRC) to supplement the flow of funding, information and intellectual property rights between industry, universities, and the national labs. A novel aspect of the partnership is the creation of a cooperative research and development agreement with a subsidiary nonprofit entity structured to allow broad industrial and university participation.

With a broad range of technical expertise in all the disciplines critical to advancing nanotechnologies, Sandia will identify potential projects for NINE that involve university collaborators and address pressing U.S needs, and will then collaborate with universities and industry participants. SRC has 27 years of experience in arranging collaborative research for the semiconductor industry, defining industry needs and investing in and managing the research that gives its members a competitive advantage in the dynamic global marketplace.

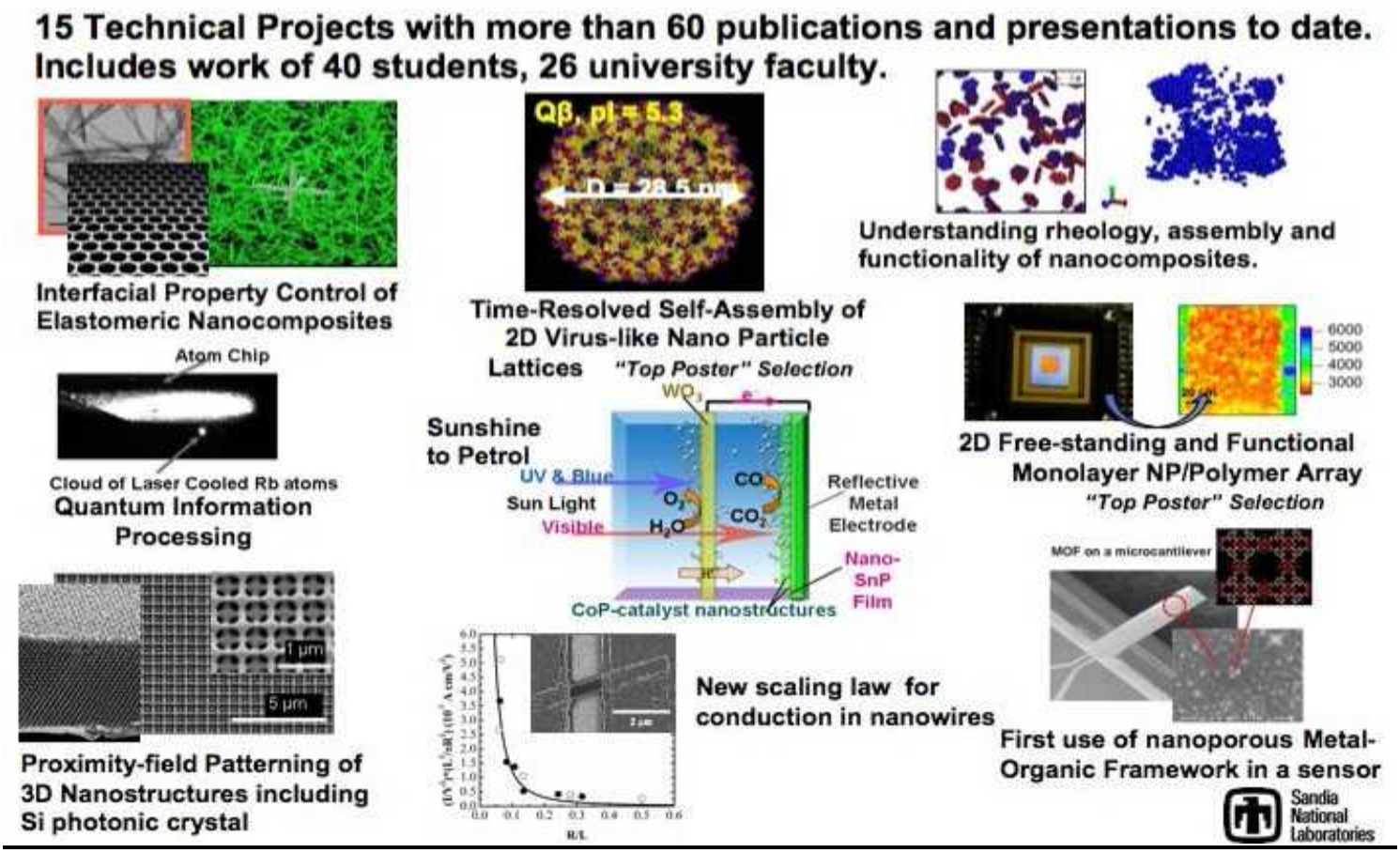
"This deal represents a unique collaboration as part of the National Institute for Nano-Engineering (NINE) partnership between government and industry," said Brian Kacedon, chair of the LES High Technology Sector. The deal has the potential to result in real advances in the diverse field of nano-engineering, including nano-engineered chemical processes, nano-composites, and nano manufacturing. In addition, it is also providing a forum for the training of the next generation of nanotechnology researchers."



Also completed this past year, was the first Sandia/industry/university partner co-selection of technical projects that will be NINE's focus during the next several years. These projects, with R&D funding totaling more than $9M, will enable advances in high-value, nano-engineering areas, while providing exciting research opportunities for 36 graduate-level NINE students. The projects involve research into (a) responsive nanocomposites, (b) integration of block-copolymer with nanoimprint lithography, (c) scalable assembly of patterned ordered functional micelle arrays, and (d) self-powered ferroelectric nano-sensors for extreme environments.

Recently Completed NINE Projects Produced Outstanding Technical Nano-Engineering Work

NINE's 2010 summer program – running from early June through early August – boasts the largest enrollment in its four years of operation. Seventeen undergraduates visited the Labs for NINE's annual Nano Expo; twenty-six students, mostly graduate-level, are participating in the summer-long program, which is focusing on nanotechnologies and innovation. For the first time since NINE began, 10 NSF-funded students are also on site participating in "NINE Associate Projects" involving topics such as nanocomposites, nanosensors, and metamaterials.



In summary, NINE's goals, which it already is achieving after just four years of operation, are clear:

- Train top graduate students to be global innovation leaders
- Motivate U.S. citizen undergraduates to seek advanced technical degrees
- Excite undergraduates about science and engineering, nanotechnology, and the chance to make a difference
- Find ways to reach out to underserved groups…

…and to achieve all this through work on nationally important, mission-relevant projects that will benefit from involvement of innovative student minds and their national laboratory, university, and industry leaders.

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract DE-AC04-94AL85000.