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# RPPR Final Report

## as of 12-Oct-2017

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Agreement Number: W911NF-16-1-0305

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**Report Date:** 04-Feb-2017

Date Received: 01-Aug-2017

**Final Report** for Period Beginning 05-May-2016 and Ending 04-Nov-2016

**Title:** International Conference on Nanoscience - Young Giants of Nanoscience, 2016

**Begin Performance Period:** 05-May-2016

**End Performance Period:** 04-Nov-2016

**Report Term:** 0-Other

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**Distribution Statement:** 1-Approved for public release; distribution is unlimited.

### STEM Degrees:

### STEM Participants:

**Major Goals:** The proposed conference was held in Hong Kong, in May of 2016. It was the second in a series that began as a conference on Nanoscience held at Northwestern University in August of 2011, which was originally established to celebrate the 20th anniversary of Prof. Chad A. Mirkin's Lab at Northwestern. That event had ~100 participants and consisted of 20 lectures from academic and industry leaders in nanoscience and nanotechnology. Due to the overwhelming response to the high-quality talks and the fruitful exchange of ideas between academic and high-tech industry, the organizing committee decided to establish this event as a series, held every five years. The plan is to hold a meeting at Northwestern, at the International Institute for Nanotechnology, and then five years later, hold the meeting at a location in Asia. Therefore, we chose Hong Kong as the first Asian location of the conference. In the future we anticipate Singapore and South Korea as locations.

In 2016 the Institute of Textiles and Clothing (ITC) and the Department of Applied Physics (AP) at The Hong Kong Polytechnic University hosted the 2nd event of this series, with the theme "Young Giants of Nanoscience". This international conference gathered some of the very best young scientists from across Asia and the United States to present their state-of-the-art findings. The goals included the building up of close ties and relationships that can form a longstanding platform for the Asia-Pacific community of nanoscientists. We believe such efforts will lead to future collaborations, and will provide a valuable learning opportunity for local research students in Hong Kong and potentially students and postdoctoral fellows visiting from across the world.

**Accomplishments:** The program involved a three-day event including Plenary and Oral presentations given by top-tier nonscientists, together with poster sessions for postdoctoral fellows and graduate students. The topics discussed at the "Young Giants of Nanoscience" included:

- Growth, Synthesis, and Assembly of Nanomaterials
- Nanofabrication by Unconventional Methods
- Nanomedicine
- Nanoelectronics
- Nanoptics
- Catalysis
- Sense and Response Systems
- Energy Conversion and Storage
- Stimuli-responsive materials
- Molecular motors
- Biomolecular self-assembly

## RPPR Final Report as of 12-Oct-2017

- Dissipative / fueled self-assembly
- Bioinspired materials
- Synthetic methodology
- Catalytic self-assembly
- Organized assemblies
- Self-replicating molecular systems
- Translational applications in nanotechnology

One of the most tangible outcomes of this event was a Special Issue of the Journal Small (a nanomaterials, and micro-materials journal with broad readership worldwide), which is currently being edited and compiled for publication. All of the speakers were invited to submit, and many have done so with publication expected in the coming months.

An example of the invitation letter is shown below, which was sent out to presenters and others in the field following the symposium in late 2016, early 2017. NOTE: Editors include myself, and co-organizer in Hong Kong, Zijian Zheng, as well as Jwa-Min Nam (Korea).

Dear Professor XXX,

With the decrease in size and increase in complexity of materials, nanointerfaces has become an important research field and play an essential role in the performance of many materials and devices. In recognition of the importance of the study of nanointerfaces, a themed issue on this subject is planned for Small. We aim to highlight the state of the art in the field and showcase recent research in the area. This issue will address the following topics: advanced nanointerfaces research in energy, medicine, optics, flexible electronics and nanofabrication.

We recognize that you have made important contributions to this field, and it is therefore fitting that you will also make an excellent contribution to this issue. Therefore we invite you to submit a manuscript for publication in this Special Issue in which you report some of your recent work. The issue will contain a mixture of original (Communications and Full Papers) and review-type (Reviews and Concepts) articles, and you can choose which type of article you would prefer to submit or if you would like to submit more than one. Further information can be found in the Guide to Authors on the Small website ([http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1613-6829/homepage/2296\\_authors.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1613-6829/homepage/2296_authors.html)). The latest possible deadline for receipt of your contribution is May 31, 2017.

Manuscripts should be submitted directly to the Small editorial office via the submission system via <http://www.editorialmanager.com/small-journal/>. Please select the option "By Invitation Only: Frontiers in Nanointerfaces" and indicate in your cover letter that your manuscript is intended for the Frontiers in Nanointerfaces Special Issue. Small is a high-profile and high-impact journal, manuscripts considered for the special issue will be judged by the same stringent standards of peer review as regular submissions to Small, as our goal is to showcase the very best cutting-edge research in our field. Accepted manuscripts will be published online as soon as possible, and collected into a dedicated printed issue.

We do hope that you can accept our invitation. Please send us a short note to confirm your participation in the issue to [small@wiley-vch.de](mailto:small@wiley-vch.de). If you have any further questions please do not hesitate to contact us or the Small editorial office ([small@wiley-vch.de](mailto:small@wiley-vch.de)).

Sincerely,

Jie on behalf of

SPECIAL ISSUE EDITORS:

Dr. Zijian Zheng  
The Hong Kong Polytechnic University  
Leading Guest Editor  
Prof. Hua Zhang  
Nanyang Technological University  
Guest Editor  
Prof. Jwa-min Nam  
Seoul National University

**RPPR Final Report**  
as of 12-Oct-2017

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Prof. Nathan Gianneschi  
University of California, San Diego  
Guest Editor  
Dr. Jie Cai  
Small, Wiley  
Editor  
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SMALL

Impact Factor (2015 Journal Citation Report): 8.368

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www.advancedsciencenews.com and <http://MaterialsViewsChina.com>

**Training Opportunities:** Nothing to Report

**Results Dissemination:** See "Accomplished" section. This conference has been very successful in terms of dissemination, as much of the work presented will find its way into a special issue that is being compiled now for the nano science journal, Small.

**Honors and Awards:** Nothing to Report

**Protocol Activity Status:**

**Technology Transfer:** Nothing to Report

**PARTICIPANTS:**

**Participant Type:** PD/PI

**Participant:** Nathan Gianneschi

**Person Months Worked:** 1.00

Project Contribution:

International Collaboration:

International Travel:

National Academy Member: N

Other Collaborators:

**Funding Support:**

**RPPR Final Report**  
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