Jieun Yang
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PROFESSIONAL PREPARATION

- Ulsan National Inst. Of Sci. & Tech. (UNIST, Korea), Materials Chemistry, Ph.D., 2015
- Kyung Hee University (Korea), Chemistry, B.S., 2009.

APPOINTMENTS

- Postdoctoral Researcher, 2016 – Pres.
- Rutgers Energy Institute Research Fellow, 2015 – 2016.

RESEARCH INTERESTS

My research deal understanding the fundamental structure property relationships of 2D materials. I utilize advanced analytical techniques (Raman, XPS, SEM, TEM and STEM) and measurements to extract new insights in atomically thin materials. I investigate the properties of hydrogen evolution reaction (HER) and oxygen reduction reaction (ORR) on atomically thin 2D materials. Currently, my project is related to observe the catalytic activities depending on the electrical properties of single layer of MoS_2 with atomic level.

AWARDS AND HONORS

- Rutgers Energy Institute Postdoctoral Fellowship, 2015-2016
- Elite Graduate Student Fellowship, UNIST, 2011-2014
- Outstanding Graduate Student Award, UNIST, 2013
- Best Poster Award, Nano Korea, Korea, 2011

SELECTED PROFESSIONAL ACTIVITIES

- Member of MRS and ACS, 2015 – Pres.
- Member of Society of Women Engineers at Rutgers (Postdoctoral Mentor), 2015 – Pres.
- Reviewer for *ACS Nano*, *Journal of American Chemical Society*, *Applied Materials Today* among others.

OUTREACH, MENTORING HIGHLIGHTS (Mentored 12 undergraduate and high school students and 3 PhD and MS students).

- Actively engaged in organizing and participating in Rutgers Research in Science & Engineering (RiSE) summer internship program. RiSE is annual Rutgers summer program, 50 outstanding undergraduates from underrepresented and disadvantaged backgrounds from across the nation participate in interdisciplinary research for ten weeks with a carefully matched faculty mentor.
- Mentor to Jessica Johnson, RiSE intern 2016 – Jessica will be attending graduate school in 2017 to build on her summer research accomplishments.
- Mentor to Jacob Kupferberg – Jacob is a co-author on a paper published in Science in 2016. He is also the winner of the NSF Graduate Student Fellowship.
- Mentor for Shyama Shah and Kerem Sahiner – Rutgers Energy Institute UG Internship winners.
- Demonstrations for school children on Rutgers Day and at local schools.

SELECTED PUBLICATIONS (Total = 17, Publications During Postdoc = 5, Citations = 638, H-In

dex = 11, Citations per paper = 37)**:**

1. D. Voiry*, **J. Yang***, J. Kupferberg, R. Fullon, C. Lee, H. Y. Jeong, H. S. Shin, and M. Chhowalla, "High-quality graphene via microwave reduction of solution-exfoliated graphene oxide", Science **2016**, Doi:10.1126/science.aah3398 (*equal contribution)
2. D. Voiry, R. Fullon, **J. Yang**, C. C. C. Silva, R. Kappera, I. Bozkurt, D. Kaplan, M. J. Lagos, P. E. Batson, G. Gupta, A. D. Mohite, L. Dong, D. Er, V. B. Shenoy, T. Asefa and M. Chhowalla, "The role of electronic coupling between substrate and 2D MoS_2 nanosheets in electrocatalytic production of hydrogen", Nature Materials **2016**, 15, 1003.
3. D. Voiry, **J. Yang** and M. Chhowalla, "Recent strategies for improving the catalytic activity of 2D TMD nanosheets toward the hydrogen evolution reaction", Advanced Materials **2016**, 28, 6197.
4. M. Chhowalla, D. Voiry, **J. Yang,** H. S. Shin, and K. P. Loh "Phase-engineered transition-metal dichalcogenides for energy and electronics", MRS Bulletin **2015**, 40, 585.
5. **J. Yang** and H. S. Shin, "Recent Advances in Layered Transition Metal Dichalcogenides for Hydrogen Evolution Reaction", Journal of Materials Chemistry A **2014**, *2*, 5979**.**
6. **J. Yang**, D. Voiry, S. J. Ahn, D. Kang, A. Y. Kim, M. Chhowalla, and H. S. Shin, "Two Dimensional Hybrid Nanosheets of Tungsten Disulfide and Reduced Graphene Oxide as Catalysts for Enhanced Hydrogen Evolution Reaction", Angewente Chemie International Edition **2013**, 52, 13751.
7. C. Rout, B.-H. Kim, X. Xu, **J. Yang**, H. Y. Jeong, D. Odkhuu, N. Park, J. Cho, and H. S. Shin**,** "Synthesis and Characterization of Patronite Form of Vanadium Sulfide on Graphitic Layer", Journal of the American Chemical Society **2013**, 135, 8720.
8. S. J. Ahn, **J. Yang**, K. W. Lim, H. S. Shin, "Selective Formation of Thickness Controlled Fullerene (C_{60}) Disk by Vapor-Solid Process", Journal of Crystal Growth **2013**, 363, 141.
9. **J. Yang**, J.-W. Kim, H. S. Shin**,** "Facile method for rGO FET: selective adsorption of rGO on SAM-treated gold electrode by electrostatic attraction", Advanced Materials **2012**, 24, 2299**.**
10. **J. Yang**, M. Heo, H. J. Lee, S.-M. Park, J. Y. Kim, H. S. Shin, "Reduced graphene oxide (rGO)-wrapped fullerene (C_{60}) wires", ACS Nano **2011**, 5, 8365.