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Short Bio

Dr. Jun Hong Park is an assistant professor in School of Materials Science & Engineering at Gyeongsang National University. He joined the department in September 2018. His research interests are in the areas of surface chemistry, nano electric materials and low power systems. Currently, his work focuses on chemical functionalization of 2D transition metal dichalcogenides, building organic/2D heterojunctions, beyond CMOS Tech. and chemical sensing platforms.

Educations

Ph. D. in University of California, San Diego (*August 2010 ~April 2017*)

Major: Materials Science and Engineering

Adviser: Prof. Andrew C. Kummel

M.S. in Hanyang University, Seoul, Korea (*March 2007~February 2009*)

Major: Materials Science and Engineering

Adviser: Prof. Chong Seung. Yoon

B.S. in Hanyang University, Seoul, Korea (*March 2000~February 2007*)

Major: Materials Science and Engineering

Selected Publications

- [1] Band Structure Engineering of Layered WSe₂ via One-Step Chemical Functionalization
ACS Nano 2019, 13, 7, 7545-7555
Jun Hong Park, Amritesh Rai, Jeongwoon Hwang, Chenxi Zhang, Iljo Kwak, Steven F. Wolf, Suresh Vishwanath, Xinyu Liu, Malgorzata Dobrowolska, Jacek Furdyna, Huili Grace Xing, Kyeongjae Cho, Sanjay K. Banerjee, and Andrew C. Kummel
- [2] n-type doping effect of CVD-grown multilayer MoSe₂ thin film transistors by two-step functionalization
Advanced Electronic Materials, Volume 4, 12, December 2018, Page 1800308
Seongin Hong, Haelin Im, Young Ki Hong, Na Liu, Sunkook Kim, and **Jun Hong Park**
- [3] Defect Passivation of Transition Metal Dichalcogenides via a Charge transferred Van-der-Waals interface
Science Advances, 2017, vol. 3, no. 10, e1701661
Jun Hong Park, Atresh Sanne, Yuzheng Guo, Matin Amani, Kehao Zhang, Hema C.P. Movva, Joshua A. Robinson, John Robertson, Ali Javey, Sanjay K. Banerjee, Andrew C. Kummel

Xinyu Liu, Jacek Furdyna, Joshua A. Robinson, Huili Grace Xing, and Andrew C. Kummel

- [4] Atomic Layer Deposition of Al₂O₃ on WSe₂ Functionalized by Titanyl Phthalocyanine
ACS Nano, 2016, 10 (7), pp 6888–6896
Jun Hong Park[†], Sara Fathipour[†], Iljo Kwak, Christopher F. Ahles, Suresh Vishwanath, Huili Grace Xing, Susan K. Fullerton-Shirey, Alan Seabaugh*, Andrew C. Kummel*,
- [5] Scanning Tunneling Microscopy and Spectroscopy of Air Exposure Effects on Molecular Beam Epitaxy Grown WSe₂ Monolayers and Bilayers
ACS Nano 2016, 10, pp 4258–4267
Jun Hong Park[†], Suresh Vishwanath[†], Xinyu Liu, Huawei Zhou, Sarah M. Eichfeld, Susan K. Fullerton-Shirey, Joshua A. Robinson, Randall M. Feenstra, Jacek K. Furdyna, Debdeep Jena, Huili Grace Xing*, and Andrew C. Kummel*
- [6] In Situ Observation of Initial Stage in Dielectric Growth and Deposition of Ultrahigh Nucleation Density Dielectric on Two-Dimensional Surfaces
Nano Letters, 2015, 15 (10), pp 6626–6633
Jun Hong Park, Hema C.P. Movva, Evgeniy Chagarov, Kasra Sardashti, Harry Chou, Iljo Kwak, Kai-Ting Hu, Susan K. Fullerton-Shirey, Pabitra Choudhury, Sanjay K. Banerjee, Andrew C. Kummel
- [7] Atomic Imaging of the Irreversible Sensing Mechanism of NO₂ on Copper Phthalocyanine
Journal of the American Chemical Society, 2013, 135 (39), pp 14600–14609
Jun Hong Park, James E. Royer, Evgeniy Chagarov, Tobin Kaufman-Osborn, Mary E. Edmonds, Tyler Kent, Sangyeob Lee, William C. Trogler, Andrew C. Kummel