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简历:

胡卫国, 男, 2007年毕业于中科院半导体研究所, 获博士学位。同年于三重大学(Mie Univ.)电气电子工学科开展氮化物异质外延和(光)电子器件研制的博士后研究; 2009年于神户大学(Kobe Univ.)电气电子工学科开展量子点太阳能电池的博士后研究; 2011年任东北大学(Tohoku Univ.)新能源研究中心助理教授, 领导太阳能电池课题组, 承接学术振兴委员会、本田技术研究院、京瓷中央研究所等机构在新能源材料与器件领域的研究项目。目前研究方向为半导体材料外延和表征、压电(光)电子器件研制、器件物理和数值模拟。迄今为止在Prog. Photovoltaics、Appl.Phys.Lett、Nanotechnology 等学术期刊发表论文39篇, 授权专利1项, 在IEDM等40多个学术会议上报告研究成果受到国际学术界和工业界广泛关注, 日刊工业新闻、仙台电视台、东北大学重要成果展示及多个科技网站等媒体报道及转载研究进展。受邀为Physical Chemistry Chemical Physics、Optics express、Nanoscale research letters等期刊审阅稿件。

研究方向:

专家类别:

研究员

职务:

社会任职:

承担科研项目情况:

获奖及荣誉:

- 1、湖北省优秀硕士学位论文2005年
- 2、仙台电视台网络专访: http://cue-tv.net/program/columbus/samukawa_lab/

代表论著:

- 1) W. G. Hu*, Y. Harada, A. Hasegawa, T. Inoue, O. Kojima, and T. Kita, 2011. Intermediate band photovoltaics based on interband-intraband transitions using In_{0.53}Ga_{0.47}As/InP superlattice. Progress in Photovoltaics: Research and Applications, 21(4), 472-480, 2013
- 2) Weiguohu, Makoto Igarashi, Ming-Yi Lee, Yiming Li* and Seiji Samukawa*, Realistic quantum design of silicon quantum dot intermediate band solar cells, Nanotechnology 24 (26), 265401, 2013
- 3) W. Hu, M. F. Budiman, M. Igarashi, M.-Y. Lee, Y. Li, and S. Samukawa*, Modeling miniband for realistic Silicon nanocrystal array, Math. Comput. Model. 58(1-2), 306-311, 2013
- 4) M. Igarashi, M.F. Budiman, W. Pan, W. Hu, Y. Tamura, M. E. Syazwan, N. Usami, S. Samukawa*, Effects of formation of mini-bands in two-dimensional array of silicon nanodisks with SiC interlayer for quantum dot solar cells, Nanotechnology, 24 (1), 015301 1-9, 2013
- 5) Toshiyuki Kaiizu, Yosuke Tamura, Makoto Igarashi, Weiguohu, Rikako Tsukamoto, Ichiro Yamashita, Seiji Samukawa, Yoshitaka Okada*, Photoluminescence from GaAs nanodisks fabricated by using combination of neutral beam etching and atomic hydrogen-assisted molecular beam epitaxy regrowth, Appl. Phys. Lett., 101(11), 113108 1-4, 2012

- 6) M.F. Budiman, W. G. Hu, M. Igarashi, R. Tsukamoto, T. Isoda, K.M. Itoh, I. Yamashita, A. Murayama, Y. Okada, and S. Samukawa*, Control of optical bandgap energy and optical absorption coefficient by geometric parameters in sub-10nm silicon-nanodisc array structure. *Nanotechnology*, 23(6), 065302 1-6, 2012
- 7) Makoto Igarashi, Mohd Fairuz Budiman, Wugen Pan, Weiguo Hu, Noritaka Usami, Seiji Samukawa*, Quantum dot solar cells using 2-dimensional array of 6.4-nm-diameter silicon nanodisks fabricated using bio-templates and neutral beam etching, *Appl. Phys. Lett.*, 101(6), 063121 1-3, 2012
- 8) W. G. Hu*, T. Inoue, O. Kojima, and T. Kita, Effects of absorption coefficients and intermediate-band filling in InAs/GaAs Quantum dots solar cells, *Appl. Phys. Lett.* 97(19), 193106 1-3, 2010
- 9) Weiguo Hu*, Bei Ma, Dabing Li, Hideto Miyake, Kazumasa Hiramatsu, In-plane electric field induced by the polarization and photovoltaic effect in a-plane GaN, *Appl. Phys. Lett.*, 94(23), 231102 1-3, 2009
- 10) Bei Ma*, Weiguo Hu, Hideto Miyake, Kazumasa Hiramatsu, Nitridating r-plane sapphire to improve crystal qualities and surface morphologies of a-plane GaN grown by metalorganic vapor phase epitaxy, *Appl. Phys. Lett.* 95(12), 121910 1-3, 2009
- 11) Ting-Ting Kang*, R. Q. Zhang, W. G. Hu, G. W. Cong, F. A. Zhao, X. X. Han, S. Y. Yang, X. L. Liu, Q. S. Zhu, and Z. G. Wang, Plasmons in vertically coupled InAs/GaAs quantum dots, *Phys. Rev. B*, 76(7), 0705345 1-6, 2007
- 12) Jiejun Wu*, Jiemin Li, Guangwei Cong, Hongyuan Wei, Panfeng Zhang, Weiguo Hu, Xianglin Liu, Qingsheng Zhu, and Zhanguo Wang, Temperature dependence of the formation of nano-scale indium clusters in InAlGaN alloys on Si(111) substrates, *Nanotechnology*, 17(5), 1251-1254, 2006
- 13) Ting-Ting Kang*, Xianglin Liu, Ri Q. Zhang, Wei G. Hu, Guangwei Cong, Feng-Ai Zhao, and Qingsheng Zhu, InN nanoflowers grown by metal organic chemical vapor deposition, *Appl. Phys. Lett.*, 89(7), 071113 1-3, 2006
- 14) Cong GW*, Wei HY, Zhang PF, Peng WQ, Wu JJ, Liu XL, Jiao CM, Hu WG, Zhu QS, Wang ZG, One-step growth of ZnO from film to vertically well-aligned nanorods and the morphology-dependent Raman scattering, *Appl. Phys. Lett.*, 87(23), 231903 1-3, 2005