

# 黃啓賢

## 著作目錄

### 期刊論文

1. Wen-Ya Lee, Cheng Liang, Jian-Hong Ye, Chi-Hsien Huang, Chien-Kuo Hsieh (2020, Jun). Facile synthesis of multi-layer graphene-like graphitic structure using commercial candle as the solid-state carbon source for electrochemical supercapacitors. *Surface & Coatings Technology*, 398, 126075. (IF: 3.784, Ranking:3/21, Materials Science, Coatings & Films)
2. Chi-Hsien Huang\*, Tzu-Ting Huang , Chia-Heng Chiang , Wei-Ting Huang , Yi-Ting Lin (2020, May). A chemiresistive biosensor based on a layered graphene oxide/graphene composite for the sensitive and selective detection of circulating miRNA-21. *Biosensors and Bioelectronics*, 164, 112320. MOST 107-2221-E-131-006-MY3. 本人為第一作者、通訊作者. (IF: 10.257, Ranking: 1/86, Chemistry, Analytical)
3. Yinying Sheng, Tzu-Ting Huang, Yi-Ting Lin, Tai-Ze Wu, Wei Li, Chi-Hsien Huang\* (2020, May). Layered graphene composite for flexible bioelectrical sensor applications. *Surface & Coatings Technology*, 397 , 125973. 本人為通訊作者. (IF: 3.784, Ranking:3/21, Materials Science, Coatings & Films)
4. Kai-Hsiang Luo, Chao-Kuang Cheng, Jeng-Yu Lin, Chi-Hsien Huang, Tsung-Kuang Yeh, Chien-Kuo Hsieh (2020, Apr). Highly-porous hierarchically microstructure of graphene-decorated nickel foam supported two-dimensional quadrilateral shapes of cobalt sulfide nanosheets as efficient electrode for methanol oxidation. *Surface & Coatings Technology*, 393, 125850. (IF: 3.784, Ranking:3/21, Materials Science, Coatings & Films)
5. Shih-Chieh Yen, Zhao-Wei Liu, Ruey-Shin Juang, Sravani Sahoo, Chi-Hsien Huang, Peilin Chen, Yu-Sheng Hsiao, and Ji-Tseng Fang (2019, Oct). Carbon Nanotube/Conducting Polymer Hybrid Nanofibers as Novel Organic Bioelectronic Interfaces for Efficient Removal of Protein-Bound Uremic Toxins. *ACS Applied Materials & Interfaces*, 11, 43843-43856. (IF: 8.758, Ranking: 33/314, Materials Science, Multidisciplinary)
6. Hao-Cheng Wang, Yu-Che Lin, Chung-Hao Chen, Chi-Hsien Huang, Bin Chang, Yi-Ling Liu, Hao-Wen Cheng, Cheng-Si Tsao, and Kung-Hwa Wei (2019, Sep). Hydrogen Plasma-Treated MoSe<sub>2</sub> Nanosheets Enhance the Efficiency and Stability of Organic Photovoltaics. *Nanoscale*, 11, 17460-17470. (IF: 6.895,

**Ranking: 23/154, Physics, Applied)**

7. Chun-Hsuan Lin, Wei-Tong Chen, Chi-Hsien Huang\*, Wei-Yen Woon\*, Chih-Ting Lin\* (2019, Aug). Effects of  $\pi$ -electron in humidity sensing of artificially stacked graphene bilayers modified with carboxyl and hydroxyl groups. *Sensors and Actuators B: Chemical*, 301, 127020. MOST 107-2221-E-131-006-MY3. 本人為通訊作者. **(IF: 7.100, Ranking: 2/64, Instrument & Instrumentation)**
8. Chi-Hsien Huang\*, Zih-Yang Chen, Chi-Ling Chiu, Tzu-Ting Huang, Hsin-Fei Meng, Peichen Yu\* (2019, Jul). Surface Micro-/Nanotextured Hybrid PEDOT:PSS-Silicon Photovoltaic Cells Employing Kirigami Graphene. *ACS Applied Materials & Interfaces*, 11, 29901-29909. MOST 107-2221-E-131-006-MY3. 本人為第一作者、通訊作者. **(IF: 8.758, Ranking: 33/314, Materials Science, Multidisciplinary)**
9. Chun-Hsuan Lin, Ming-Shiu Tsai, Wei-Tong Chen, Yi-Zhe Hong, Po-Yu Chien, Chi-Hsien Huang\*, Wei-Yen Woon\* and Chih-Ting Lin\* (2019, Apr). A low-damage plasma surface modification method of stacked graphene bilayers for configurable wettability and electrical properties. *Nanotechnology*, 30, 245709. MOST 106-2221-E-131-009. 本人為通訊作者. **(IF: 3.551, Ranking: 40/154, Physics, Applied)**
10. Chi-Hsien Huang\*, Tsung-Han Lu (2018, Feb). Rapid oxidation of CVD-grown graphene using mild atmospheric pressure O<sub>2</sub> plasma jet. *Surface & Coatings Technology*, 350, 1085-1090. MOST 106-2221-E-131-009. 本人為第一作者、通訊作者. **(IF: 3.784, Ranking: 3/21, Materials Science, Coatings & Films)**
11. Jen-Kuang Lee, I-Shun Wang, Chi-Hsien Huang, Yih-Fan Chen, Nien-Tsu Huang, Chih-Ting Lin (2017, Dec). Pre-Clinical Tests of an Integrated CMOS Biomolecular Sensor for Cardiac Diseases Diagnosis. *Sensors*, 17, 2733. **(IF: 3.275, Ranking: 15/64, Instrument & Instrumentation)**
12. Jun-Ru Zeng, Chih-Chia Cheng, Bohr-Ran Huang, Chi-Hsien Huang\*, Jem-Kun Chen\* (2017, May). Pillar arrays of tethered polyvinyltetrazole on silicon as a visualization platform for sensing of lead ions. *Sensors and Actuators B: Chemical*, 243, 234-243. 本人為通訊作者.
13. Jun-Ru Zeng, Chih-Chia Cheng, Chi-Jung Chang, Chi-Hsien Huang\*, Jem-Kun Chen\* (2017, Apr). Fabrication of two-dimensional photonic crystals of tethered polyvinyltetrazole on silicon surfaces for visualization in Cu<sup>2+</sup> ion sensing. *Dyes and Pigments*, 139, 300-309. 本人為通訊作者.
14. Chi-Hsien Huang\*, Yin-Yin Wang, Tsung-Han Lu and Yen-Cheng Li (2017, Jan). Flexible Transparent Electrode of Hybrid Ag-Nanowire/Reduced-Graphene-Oxide Thin Film on PET Substrate Prepared

- Using H<sub>2</sub>/Ar Low-Damage Plasma. *Polymers*, 9(1), 28. MOST 105-2221-E-131-008. 本人為第一作者、通訊作者。
15. Da-Han Kuan, I-Shun Wang, Jiun-Rue Lin, Chao-Han Yang, Chi-Hsien Huang, Yen-Hung Lin, Chih-Ting Linc and Nien-Tsu Huang (2016, Sep). A microfluidic device integrating dual CMOS polysilicon nanowire sensors for on-chip whole blood processing and simultaneous detection of multiple analytes. *Lab on a Chip*, 16(16), 3105-3113.
  16. Si-Ying Wu, Shuenn-Kung Su, Chi-Jung Chang, Chi-Hsien Huang\*, Jem-Kun Chen\* (2016, Aug). Sol-gel-synthesized titania-vanadia nanocrystal films for triple-functional window coatings. *Ceramics International*, 42, 17610-17619. 本人為通訊作者。
  17. Da-Han Kuan, I-Shun Wang, Jiun-Rue Lin, Chao-Han Yang, Chi-Hsien Huang, Yen-Hung Lin, Chih-Ting Lin and Nien-Tsu Huang (2016, Jun). A microfluidic device integrating dual CMOS polysilicon nanowire sensors for on-chip whole blood processing and simultaneous detection of multiple analytes. *Lab on a Chip*, 16, 3105-3113.
  18. Chi-Hsien Huang\*, Shu-Chen Yu, Yi-Chun Lai, Gou-Chung Chi, and Peichen Yu\* (2016, Mar). Efficiency enhancement of organic/GaAs hybrid photovoltaic cells using transparent graphene as front electrode. *IEEE Journal of Photovoltaics*, 6(2), 480-485. 本人為第一作者、通訊作者。
  19. Hsiang-En Cheng, Yin-Yin Wang, Po-Chen Wu, Chi-Hsien Huang\* (2016, Mar). Preparation of large-area graphene oxide sheets with a high density of carboxyl groups using O<sub>2</sub>/H<sub>2</sub> low-damage plasma. *Surface & Coatings Technology*. MOST 104-2221-E-131-015. 本人為通訊作者。
  20. Pei-Yin Zhou, Chih-Chia Cheng, Chi-Hsien Huang and Jem-Kun Chen (2016, Feb). Hexagonal pillar structure of heteroepitaxial titania-vanadia nanocrystal films for high performance in thermochromic and photocatalytic properties. *Physial Chemistry Chemical Physics*, 18(13), 9088-9101.
  21. Jun-He Chang, Yu-Han Hung, Xu-Feng Luo, Chi-Hsien Huang, Sungmi Jung, Jeng-Kuei Chang, Jing Kong, and Ching-Yuan Su (2016, Jan). The hierarchical porosity of a three-dimensional graphene electrode for binder-free and high performance supercapacitors. *RSC Advances*, 6, 8384-8394.
  22. Yu-Min Chen, Shih-Ming He, Chi-Hsien Huang, Cheng-Chun Huang, Wen-Pin Shih, Chun-Lin Chu, Jing Kong, Ju li and Ching-Yuan Su (2016, Jan). Ultra-large suspended graphene as a highly elastic membrane for capacitive pressure sensors. *Nanoscale*, 8, 3555-3564.
  23. Shi-Di Lan, Chih-Chia Cheng, Chi-Hsien Huang, Jem-Kun Chen (2015, Dec). Synthesis of sub-10 nm VO<sub>2</sub> nanoparticles films with plasma-treated glass slides

- by aqueous sol–gel method . *Applied Surface Science*, 357(B), 2069-2076.
24. Chang Ren, Chia-Ming Yang, Chengang Lyu, Chin-Yuan Hsu, Tsung-Cheng, Hau-Cheng Wang, Hao Yang, Wei-Tse Lin, Pi-Chun Juan, Chi-Hsien Huang, Dorota G. Pijanowska, Jer-Chyi Wang, and Jung-Ruey Tsai (2015, Mar). Nitrogen ratio and RTA optimization on sputtered TiN/SiO<sub>2</sub>/Si electrolyte-insulator-semiconductor structure for pH sensing characteristic. *Vacuum*, 118, 113-117.
  25. Gang-Yan Zhou, Ai-Wei Lee, Jia-Yaw Chang, Chi-Hsien Huang\* and Jem-Kun Chen\* (2014, Sep). Fabrication of metamaterial absorber using polymer brush-gold nanoassemblies for visualizing the reversible pH-responsiveness. *Journal of Materials Chemistry C*, 2, 8226-8234. 本人為通訊作者.
  26. Chi-Hsien Huang\*, Ching-Yuan Su, Yen-Cheng Li, Chao-Sung Lai, Seiji Samukawa (2014, Jul). Ultra-Low Damage Radical Treatment for Highly Controllable Oxidation of Large-Scale Graphene Sheets. *CARBON*, 73, 244-251. MOST 102-2218-E-131-003. 本人為第一作者、通訊作者.
  27. Kuan-I Ho, Chi-Hsien Huang, Jia-Hong Liao, Wenjing Zhang, Lai-Jong Li, Chao-Sung Lai,, Ching-Yuan Su (2014, Jul). Fluorinated Graphene as High Performance Dielectric Materials and the Applications for Graphene Nanoelectronics. *Scientific Reports*, 4, 5894.
  28. Kuan-I Ho, Jia-Hong Liao, Chi-Hsien Huang, Chang-Lung Hsu, Wenjing Zhang, Ang-Yu Lu, Lain-Jong Li, Chao-Sung Lai and Ching-Yuan Su (2014, Mar). One-Step Formation of a Single Atomic-Layer Transistor by the Selective Fluorination of a Graphene Film. *Small*, 10, 988-997.
  29. Chi-Hsien Huang, I-Shun Wang, Kuan-I Ho, and Chao-Sung Lai (2013, Jun). High Polarization and Low-Repulsion HfO<sub>2</sub> Thin Film for Alkali Metal Ion Detections by Plasma System With a Complementary Filter. *IEEE Sensors Journal*, 13(6), 2459-65. 本人為第一作者、通訊作者.
  30. Chi-Hsien Huang, Ching-Yuan Su, Takeru Okada, Lain-Jong Li, Kuan-I Ho, Pei-Wen Li, Chien Chou, Seiji Samukawa, and Chao-Sung Lai (2013, May). Ultra-low-edge-defect graphene nanoribbons patterned by neutral beam. *Carbon*, 61, 229-35. 本人為第一作者.
  31. Chi-Hsien Huang, Chih-Ting Lin, Jer-Chyi Wang, Chien Chou, Yu-Ren Yeh, Bing-Ming Cheng, and Chao-Sung Lai (2012, Oct). Tunable bandgap energy of fluorinated nanocrystals for flash memory applications produced by low-damage plasma treatment . *Nanotechnology*, 23(47), 475201. 本人為第一作者.
  32. I-Shun Wang, Tseng-Fu Lu, Cheng-En Lue, Chi-Hsien Huang, Polung Yang, Yi-Ting Lin, Dorota G. Pijanswska, Chia-Ming Yang, Jer-Chyi Wang, Jau-Song Yu, Yu-Sun Chang and Chao-Sung Lai (2012, Mar). Immobilization of enzyme

- and antibody on LD-HfO<sub>2</sub>-EIS structure by NH<sub>3</sub> plasma treatment. *Nanoscale Research Letters*, 7, 179.
33. Takayuki Kiba, Yoshiya Mizushima, Makoto Igarashi, Chi-Hsien Huang, Seiji Samukawa, and Akihiro Murayama (2012, Feb). Picosecond transient photoluminescence in high-density Si-nanodisk arrays fabricated using bio-nano-templates. *Applied Physics Letters*, 100(5), 053117.
  34. Xuan-Yu Wang, Chi-Hsien Huang, Rikako Tsukamoto, Pierre-Andre Mortemousque, Kohei M. Itoh, Yuzo Ohno, and Seiji Samukawa (2011, Aug). Damage-free Top-down Process for Fabricating Two-dimensional Array of 7nm GaAs Nanodiscs Using Bio-template and Neutral Beam Etching. *Nanotechnology*, 22(36), 365301.
  35. Akira Wada, Kazuhiko Endo, Meishoku Masahara, Chi-Hsien Huang, Seiji Samukawa (2011, May). Low activation energy, high-quality oxidation of Si and Ge using neutral beam. *Applied Physics Letters*, 98(20), 203111. (SCI).
  36. Chi-Hsien Huang, Xuan-Yu Wang, Makoto Igarashi, Akihiro Murayama, Yoshitaka Okada, Seiji Samukawa (2011, Feb). Optical absorption characteristic of highly ordered and dense two-dimensional array of silicon nanodiscs. *Nanotechnology*, 22(10), 105301. (SCI). 本人為第一作者。
  37. Makoto Igarashi, Rikako Tsukamoto, Chi-Hsien Huang, Ichiro Yamashita, Seiji Samukawa (2010, Dec). Direct Fabrication of Uniform and High Density Sub-10nm Etching Mask Using Ferritin Molecules on Si and GaAs Surface for Actual Quantum-Dot Superlattice. *Applied Physics Express*, 4(1), 015202. (SCI).
  38. Xuan-Yu Wang, Chi-Hsien Huang, Yuzo Ohno, Makoto Igarashi, Akihiro Murayama, Seiji Samukawa (2010, Oct). Defect-free etching process for GaAs/AlGaAs hetero-nanostructure using chlorine/argon mixed neutral beam. *Journal of Vacuum Science & Technology B*, 28(6), 1138-42. (SCI).
  39. Akira Wada, Kazuhiko Endo, Meishoku Masahara, Chi-Hsien Huang, Seiji Samukawa (2010, Sep). Fabrication of Four-Terminal Fin Field-Effect Transistor with Asymmetric Gate-Oxide Thickness Using an Anisotropic Oxidation Process with a Neutral Beam. *Applied Physics Express*, 3(9), 096502. (SCI).
  40. Makoto Igarashi, Chi-Hsien Huang, Takashi Morie, Seiji Samukawa (2010, Jul). Control of Electron Transport in Two-Dimensional Array of Si Nanodisks for Spiking Neutron Device. *Applied Physics Express*, 3(8), 085202. (SCI).
  41. Chi-Hsien Huang, Makoto Igarashi, Susumu Horita, Ichiro Yamashita, Seiji Samukawa (2010, Apr). Novel Si Nanodisk Fabricated by Biotemplate and Defect-Free Neutral Beam Etching for Solar Cell Application. *Japanese Journal of Applied Physics*, 49(4), 04DL16. (SCI). 本人為第一作者。
  42. Maju Tomura, Chi-Hsien Huang, Yusuke Yoshida, Takahito Ono, Seiji

- Samukawa (2010, Apr). Plasma-Induced Deterioration of Mechanical Characteristics of Microcantilever. *Japanese Journal of Applied Physics*, 49(4), 04DL20. (SCI).
43. Chi-Hsien Huang, Makoto Igarashi, Michel Wone, Ichiro Yamashita, Seiji Samukawa (2009, Apr). Two-Dimensional Si-Nanodisk Array Fabricated Using Bio-Nano-Process and Neutral Beam Etching for Realistic Quantum Effect Devices. *Japanese Journal of Applied Physics*, 48(4), 04C187. (SCI). 本人為第一作者.
  44. Chi-Hsien Huang, Tomohiro Kubota, Makoto Igarashi, Ichiro Yamashita, Seiji Samukawa (2008, Aug). Novel stacked-nanodisk with quantum effect fabricated by defect-free chlorine neutral beam etching. *Applied Physics Express*, 1(8), 084002. (SCI).
  45. Seiji Samukawa, Tomohiro Kubota, Chi-Hsien Huang, Takeshi Hashimoto, Makoto Igarashi, Kensuke Nishioka, Masaki Takeguchi, Yukiharu Uraoka, Takashi Fuyuki, and Ichiro Yamashita (2008, Jun). A New Silicon Quantum-Well Structure with Controlled Diameter and Thickness Fabricated with Ferritin Iron Core Mask and Chlorine Neutral Beam Etching. *Applied Physics Express*, 1(7), 074002.
  46. Chi-Hsien Huang, Jiann-Shing Wu, Chun-Chin Huang (2004, Oct). Predicting the permeability and tensile behavior of high density polyethylene/tie/polyamide 6 three-layer films. *Polymer International*, 53(12), 2099-106. (SCI). 本人為第一作者.
  47. Chi-Hsien Huang, Jiann-Shing Wu, Chun-Chin Huang (2004, May). Predicting the Permeability and Tensile Properties of Multilayer Films from the Properties of the Individual Component Layers. *Polymer Journal*, 36(5), 386-93. (SCI). 本人為第一作者.
  48. Chi-Hsien Huang, Jiann-Shing Wu, Chun-Chin Huang, Li-Shin Lin (2003, Oct). Morphological, Thermal, Barrier and Mechanical Properties of LDPE/EVOH Blends in Extruded Blown Films. *Journal of Polymer Research*, 11(1), 75-83. (SCI). 本人為第一作者.
  49. Chi-Hsien Huang, Jiann-Shing Wu, Chun-Chin Huang, Li-Shin Lin (2003, Oct). Adhesion, Permeability, and Mechanical Properties of Multilayered Blown Films Using Maleated Low-Density Polyethylene Blends as Adhesion-Promoting Layers. *Polymer Journal*, 35(12), 978-84. (SCI). 本人為第一作者.

#### 研討會論文

1. Bo-Feng Chen and Chi-Hsien Huang (2019, Mar). Elasticity Enhancement of

- Graphene through a Distinctive Pattern of Kirigami. ISPlasma2019/IC-PLANTS2019, Nagoya, Japan. MOST 106-2221-E-131-006-MY3. 本人為通訊作者. oral presentation.
2. Tzu-Ting Huang and Chi-Hsien Huang (2019, Mar). High Specificity of MiRNA-21 Detection Based on Flexible Graphene Oxide/Graphene Layered Structure. SPlasma2019/IC-PLANTS2019, Nagoya, Japan. MOST 107-2221-E-131-006-MY3. 本人為通訊作者.
  3. Po-Yu Chien, Chi-Hsien Huang, Ying Li (2018, Sep). A layered graphene oxide/graphene electrode for electrochemical biosensor applications. 2019 International Conference on Solid State Devices and Materials, Tokyo, Japan. MOST 107-2221-E-131-006-MY3. 本人為通訊作者.
  4. Tzu-Ting Huang and Chi-Hsien Huang (2018, May). Using a layered graphene oxide/graphene-based flexible bioelectrical sensor for RNA detection. 12th New Diamond and Nano Carbon Conference (NDNC 2018), Arizona, USA. MOST 106-2221-E-131-009. 本人為通訊作者. oral presentation.
  5. Tzu-Ting Huang, Chia-Heng Chiang, Ying Li, Chi-Hsien Huang (2017, Nov). Annealing effect on graphene oxide/graphene layered structure for bioelectrical sensor applications. IUMRS-ICA 2017, Taipei, Taiwan. MOST 106-2221-E-131-009. 本人為通訊作者.
  6. Hong-Cing Wu, Chi-Hsien Huang (2017, Oct). Graphene/Ag-NWs/graphene sandwich structure for stretchable transparent electrode application. TACT2017 International Thin Film Conference, Hualien, Taiwan. MOST 106-2221-E-131-009. 本人為通訊作者.
  7. Chia-Heng Chiang, Ying Li, Chi-Hsien Huang (2017, Mar). An electrical biosensor based on graphene oxide/graphene structure for sensitive detection of circulating miRNA-21. 2017 9th International Symposium on Advanced Plasma Science and its Applications for Nitrides and Nanomaterials, Nagoya, Japan. MOST 105-2221-E-131-008. 本人為通訊作者.
  8. Hong-Cing Wu, Chin-Jung Hsu, Chi-Hsien Huang (2017, Mar). Double-layer graphene for stretchable transparent electrode application. 2017 9th International Symposium on Advanced Plasma Science and its Applications for Nitrides and Nanomaterials, Nagoya, Japan. MOST 105-2221-E-131-008. 本人為通訊作者.
  9. Zih-Yang Chen, Yi-Chun Lai, Chi-Hsien Huang, and Peichen Yu (2016, Sep). Microtextured Hybrid PEDOT:PSS-Silicon Solar Cells Employing Kirigami Graphene. 2016 International Conference on Solid State Devices and Materials, Tsukuba, Japan. MOST 105-2221-E-131-008. 本人為通訊作者.
  10. Po-Chen Wu and Chi-Hsien Huang (2016, Jun). Edges of Graphene Nanoribbons Healed by Low Damage Plasma Treatment for Future Nanoelectronic Devices.

- 2016 Collaborative Conference on 3D and Materials Research (CC3DMR), Incheon, South Korea. MOST 104-2221-E-131-015. 本人為通訊作者. oral presentation.
11. Yin-Yin Wang and Chi-Hsien Huang (2016, Jun). Hybrid thin film of Ag nanowire and reduced graphene oxide prepared by H<sub>2</sub>-low damage plasma as flexible transparent electrode. 2016 Collaborative Conference on 3D and Materials Research (CC3DMR), Incheon, South Korea. MOST 104-2221-E-131-015. 本人為通訊作者. poster presentation.
  12. Zong-Han Lu and Chi-Hsien Huang (2016, Jun). Graphene oxidation fabricated by low damage atmospheric pressure plasma treatments. 2016 Collaborative Conference on 3D and Materials Research (CC3DMR), Incheon, South Korea. MOST 104-2221-E-131-015. 本人為通訊作者. oral presentation.
  13. Yin-Yin Wang, Po-Chen Wu, Hsiang-En Cheng, Chi-Hsien Huang (2015, Nov). Preparation of Large Area Fluorographene by Low Damage XeF<sub>2</sub> Plasma Treatment. TACT 2015 International Thin Films Conference, Tainan, Taiwan. MOST 104-2221-E-131-015. 本人為通訊作者.
  14. Takeru Okada, Koki Igarashi, Patric Han, Taro Hitosugi, Chi-Hsien Huang, Ching-Yuan Su, Seiji Samukawa (2014, Sep). Fabrication of Two-Dimensional 10 nm Graphene Dot Array and Optical Characterization. 2014 International Conference on Solid State and Materials, Tsukuba, Japan.
  15. Hsiang-En Cheng, Ching-Yuan Su, Chi-Hsien Huang (2014, May). Large-Scale Graphene Oxide Sheets by Low Damage Plasma Treatment. Graphene 2014, Toulouse, France. MOST 102-2218-E-131-003. 本人為通訊作者.
  16. Chi-Hsien Huang, Takeru Okada, Koki Igarshi, Chao-Sung Lai, and Seiji Samukawa (2013, Oct). Ultra-low-edge-defect Graphene Nanoribbons Patterned by Neutral Beam. IEEE Nanotechnology Materials and Devices Conference, Tainan, Taiwan. 本人為第一作者.
  17. Chi-Hsien Huang, I-Shun Wang, Kuan-I Ho, Tzu-Wen Chiang, Chien Chou and Chao-Sung Lai (2013, Jan). High sensing performance of fluorinated HfO<sub>2</sub> Membrane by Low Damage CF<sub>4</sub> Plasma Treatment for K<sup>+</sup> Detections. IEEE International Nanoelectronics Conference (INEC), Singapore. 本人為第一作者.
  18. Kuan-I Ho, Jia-Hong Liao, Chi-Hsien Huang, Lain-Jong Li, Chao-Sung Lai, Ching Yuan Su (2013, Jan). Electrical probing of multi-ions solution by using graphene-based sensor. IEEE International Nanoelectronics Conference (INEC), Singapore.
  19. Kuan-I Ho, Jia-Hong Liao, Chi-Hsien Huang, Lain-Jong Li, Chao-Sung Lai, Ching Yuan Su (2013, Jan). One-step Formation of Atomic-layered Transistor by Selective Fluorination of Graphene Film. IEEE International Nanoelectronics



Conference (INEC), Singapore.

20. Akira Wada, Yuuki Yanagisawa, Maju Tomura, Chi-Hsien Huang, Satoshi Yamasaki, Takahiko Ono and Seiji Samukawa (2011, Sep). Plasma Induced Damage Affecting Mechanical Properties of Silicon Microcantilevers and Effects of Thermal Annealing on Their Recovery. International Conference on Solid State Devices and Materials (SSDM), Nagoya.
21. I-Shun Wang, Cheng-En Lue, Baseien Arricca, Chi-Hsien Huang, Mu-Yi Hua, Shih-Liang Chen and Chao-Sung Lai (2011, Sep). Graphene and PEDOT/PSS Membranes on Flexible Substrate Extended Gate Transistor for Urea Bio-sensing Applications. International Conference on Solid State Devices and Materials (SSDM), Nagoya.
22. Yosuke Tamura, Xuan-Yu Wang, Chi-Hsien Huang, Tomohiro Kubota, Jitsuo Ohta, Hiroshi Fujoka and Seiji Samukawa (2011, Sep). Damage-free GaN Etching by Chlorine Neutral Beam. International Conference on Solid State Devices and Materials (SSDM), Nagoya.
23. M. F. Budiman, Xuan-Yu Wang, Chi-Hsien Huang, Rikako Tsukamoto, Toshiyuki Kaizu, Makoto Igarashi, Pierre-Andre Mortemousque, Hajime Shinohara, Yoshitaka Okada, Akihiro Murayama, Kohei Itoh, Yuzo Ohno, Yamashita Ichiro, Seiji Samukawa (2011, Jun). Damage-free top-down processes for fabricating two-dimensional array of sub-10-nanometer GaAs nanodiscs using bio-template and neutral beam etching for intermediate band solar cell applications. IEEE Photovoltaic Specialists Conference, Seattle.
24. Makoto Igarashi, Chi-Hsien Huang, Xuan-Yu Wang, Mohd Fairuz Budiman, Yosuke Tamura, Takayuki Kiba, Akihiro Murayama, Toshiyuki Kaizu, Yoshitaka Okada, Seiji Samukawa (2011, Jun). Optical Absorption, Photo-Luminescence and Mniband Formation of A Highly Ordered and Dense 2-Dimensional Array of Si Nanodisks for Quantum Dot Solar Cells. IEEE Photovoltaic Specialists Conference, Seattle.
25. Maju Tomura, Chi-Hsien Huang, Seiji Samukawa, Yusuke Yoshida, Takahito Ono, Satoshi Yamasaki (2010, Nov). Mechanism of mechanical deterioration in silicon microcantilever induced by plasma process. IEEE Sensors Conference, Hawaii.
26. Chi-Hsien Huang, Makoto Igarashi, M. F. Budiman, Ryuji Oshima, Ichiro Yamashita, Yoshitaka Okada and Seiji Samukawa (2010, Sep). Optical Characteristics of Two-Dimensional Array of Si Nanodisks Fabricated by Defect-free Neutral Beam Etching with Bio-template. International Conference on Solid State Devices and Materials (SSDM), Tokyo. 本人為第一作者.
27. Makoto Igarashi, Chi-Hsien Huang, Takashi Morie and Seiji Samukawa (2010,

- Sep). Control of Activation Energy for Electron Transport in Two-Dimensional Array of Si Nanodisks. International Conference on Solid State Devices and Materials (SSDM), Tokyo.
28. Xuan-Yu Wang, Chi-Hsien Huang, Yuzo Ohno, Makato Igarashi, Akihiro Murayama and Seiji Samukawa (2010, Sep). Defect-free GaAs/AlGaAs Heterostructure Etching Process by Chlorine/Argon Mixed Gas Neutral Beam. International Conference on Solid State Devices and Materials (SSDM), Tokyo.
  29. Chi-Hsien Huang, Makoto Igarashi, Mohd Fairuz Budiman, Ryuji Oshima, Ichiro Yamashita, Yoshitaka Okada, and Seiji Samukawa (2010, Jun). High-density and well-ordered Si-nanodisk array with controllable band gap energy and high photon absorption coefficient for all-silicon tandem solar cell applications. IEEE Photovoltaic Specialists Conference, Hawaii. 本人為第一作者.
  30. Chi-Hsien Huang, Makoto Igarashi, Maju Tomura, Masaki Takeguchi, Susumu Horita, Yukiharu Uraoka, Takashi Fuyuki, Ichiro Yamashita, and Seiji Samukawa, (2009, Sep). A New Structure of Nanodisk (Stacked Nanodisk) Fabricated by Bio-nano-process and Defect-free Neutral Beam Etching. International Conference on Solid State Device and Materials (SSDM), Sendai. 本人為第一作者.
  31. Maju Tomura, Takahito Ono, Chi-Hsien Huang and Seiji Samukawa (2009, Sep). Deterioration of Mechanical Characteristics of Micro-cantilever by Plasma Induced Damage. International Conference on Solid State Device and Materials (SSDM), Sendai.
  32. Makoto Igarashi, Chi-Hsien Huang, Maju Tomura, Masaki Takeguchi, Susumu Horita, Yukiharu Uraoka, Takashi Fuyuki, Ichiro Yamashita, and Seiji Samukawa (2009, Sep). New Functional Device Characteristics with 2-Dimensional Array of Si Nanodisk Fabricated by Combination of Bio-template and Ultimate Top-down Etching. International Conference on Solid State Device and Materials (SSDM), Sendai.
  33. Chi-Hsien Huang, Makoto Igarashi, Michel Woné, Yukiharu Uraoka, Takashi Fuyuki, Masaki Takeguchi, Ichiro Yamashita, and Seiji Samukawa, (2008, Sep). Diameter-controlled Two-dimensional Array of Si-nanodisk using Bio-nano-process and Neutral Beam Etching for Realistic Quantum Effect

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