

# Curriculum Vitae

## Yan-Gu Lin

### Associate Research Scientist

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### Adjunct Associate Professor

Department of Materials Science and Engineering,  
National Chiao Tung University, Taiwan

## Education

2004(Sep.) ~ 2010(Nov.) National Chiao Tung University, Taiwan  
*Ph. D.* in Materials Science and Engineering

## Research Experience

- 2019(Jan.) ~ Current: **Associate Research Scientist** at National Synchrotron Radiation Research Center, Taiwan.
- 2014(Jan.) ~ 2018(Dec.): **Assistant Research Scientist** at National Synchrotron Radiation Research Center, Taiwan.
- 2012(Jan.) ~ 2013(Dec.): **Postdoctoral Fellow** at Chemical Sciences and Engineering Division & Advanced Photon Source, Argonne National Laboratory, USA.
- 2011(Jul.) ~ 2013(Jun.): **Distinguished Postdoctoral Scholar** of Academia Sinica, Taiwan.
- 2010(Dec.) ~ 2011(Jun.): **Postdoctoral Fellow**, Center for Condensed Matter Sciences, National Taiwan University, Taiwan.

## Research Interests:

### A. Energy Conversion

- ✧ **Fuel-to-Hydrogen conversion** by heterogeneous catalysis using metal/oxide-based composited nanoarchitectures
- ✧ **Solar-to-Hydrogen conversion** by photoelectrochemical water splitting using metal-oxide and III-nitride nanomaterials
- ✧ **Hydrogen-to-Electron conversion** by controllable shape of metal nanocatalysts with high-index facet for fuel cells application
- ✧ **Solar-to-Electron conversion** by plasmon sensitized photoelectrochemical solar cells over metal-oxide and III-nitride nanomaterials

### B. Energy Storage

- ✧ **High-power electron-storage device** based on redox nanomaterials as electrochemical capacitors
- ✧ **High-energy electron-storage device** based on composited metal-oxide nanoarchitectures as electrode of Li ion battery

### C. Synchrotron Radiation-based Technique

- ✧ **Synchrotron-based X-ray spectroscopy**
- ✧ **In-situ/operando X-ray spectroscopy**

### **Relevant Experimental Skills**

- ✧ **Material growth:**  
Metal, alloy, metal-oxide (ZnO, Ga<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, CuO, MnO<sub>2</sub>), III-nitride (GaN, InGaN, AlN), Si (nanotip), and carbon (CNT, graphene) nanostructures
- ✧ **Electrical characterization:**  
Two and four terminal dc current characterization; Photoconductivity (PC); Hall measurement; Field emission (FE); Pulsed current-voltage (PIV) measurement
- ✧ **Electrochemical characterization:**  
Electrochemical capacitance test; Fuel-cell activity test; Electrochemical impedance analysis
- ✧ **Catalysis characterization:**  
Gas chromatography (GC) analysis; Temperature-programmed reduction (TPR) analysis
- ✧ **Photoelectrochemical characterization:**  
Mott-schottky analysis; Incident-photon-to-current-conversion efficiency (IPCE) measurement; Incident-photon-to-hydrogen-conversion efficiency measurement
- ✧ **Optical characterization:**  
Photoluminescence (PL); Raman scattering; Fourier transform infrared (FTIR) spectrum
- ✧ **Material synthesis method:**  
Electrodeposition; Electrophoretic deposition; Impregnation method; Hydrothermal method; Spin-coating; Sol-gel route; Microwave plasma chemical vapor deposition; Sputtering; Thermal chemical vapor deposition
- ✧ **Structural characterization:**  
X-ray diffraction; X-ray absorption spectroscopy; Transmission X-ray Microscopy; High energy X-ray scattering; Pair distribution function; X-ray photoelectron spectroscopy; Scanning electron microscope; Transmission electron microscopy; Atomic force microscopy

### **List of Publications**

#### **Referred Papers:**

1. T.T. Wang, Y.C. Lin, M.C. Lin\*, **Yan-Gu Lin\***, “Au-assisted Methanol-hydrogenated Titanium Dioxide for Photocatalytic Evolution of Hydrogen” **Catal. Today**, in-press (2019) (SCI, IF=4.888).

2. H. Wang, X. Xiao, S. Liu, C.L. Chiang, X. Kuai, C.K. Peng, Y.C. Lin, X. Meng, J. Zhao, J. Choi\*, **Y.G. Lin**, J.M. Lee\*, L. Gao\*, “Structural and Electronic Optimization of MoS<sub>2</sub> Edges for Hydrogen Evolution” **J. Am. Chem. Soc.**, Vol. 141, pp18578 (2019) (SCI, IF=14.695).
3. Y.C. Lin, L.C. Hsu, C.Y. Lin, C.L. Chiang, C.M. Chou, W.W. Wu, S.Y. Chen\*, **Y.G. Lin**\*, “Sandwich-nanostructured n-Cu<sub>2</sub>O/AuAg/p-Cu<sub>2</sub>O Photocathode with Highly Positive Onset Potential for Improved Water Reduction” **ACS Appl. Mater. Interfaces**, Vol. 11, pp38625 (2019) (SCI, IF=8.456).
4. X. Bu, C.L. Chiang, R. Wei, Z. Li, Y. Meng, C.K. Peng, Y.C. Lin, Y. Li, **Y.G. Lin**\*, K.S. Chan, J.C. Ho\*, “2D Cobalt Phosphate Hydroxide Nanosheets: A New Type of High-Performance Electrocatalysts with Intrinsic CoO<sub>6</sub> Lattice Distortion for Water Oxidation” **ACS Appl. Mater. Interfaces**, Vol. 11, pp38633 (2019) (SCI, IF=8.456).
5. R. Muruganatham, I.V.B. Maggay, L.M.Z.D. Juan, M.T. Nguyen, T. Yonezawa, C.H. Lin\*, **Y.G. Lin**, W.R. Liu\*, “Electrochemical exploration of the effects of calcination temperature of a mesoporous zinc vanadate anode material on the performance of Na-ion batteries” **Inorganic Chemistry Frontiers**, Vol. 6, pp2653 (2019) (SCI, IF=5.934).
6. X. Zhu, X. Tan, K.H. Wu, C.L. Chiang, Y.C. Lin, **Y.G. Lin**, D.W. Wang, S. Smith, X. Lu\*, R. Amal\*, “N,P co-coordinated Fe species embedded in carbon hollow spheres for oxygen electrocatalysis” **J. Mater. Chem. A**, Vol. 7, pp14732 (2019) (SCI, IF=10.733).
7. P. Sabhapathy, C.C. Liao, W.F. Chen\*, T.Ch. Chou, I. Shown, A. Sabbah, **Y.G. Lin**, J.F. Lee, M.K. Tsai, K.H. Chen\*, L.C. Chen\*, “Highly efficient nitrogen and carbon coordinated N-Co-C electrocatalysts on reduced graphene oxide derived from vitamin-B12 for the hydrogen evolution reaction” **J. Mater. Chem. A**, Vol. 7, pp7179 (2019) (SCI, IF=10.733).
8. Y.C. Shen, C.Y. Tung, C.Y. Huang, Y.C. Lin, **Y.G. Lin**, R.H. Horng\*, “Study on optoelectronic characteristic of ZnGa<sub>2</sub>O<sub>4</sub> thin-film phototransistors” **ACS Appl. Electronic Materials**, Vol. 1, pp783 (2019).
9. T.T. Wang, P. Raghunath, Y.C. Lin, **Y.G. Lin**\*, M.C. Lin\*, “Effective hydrogenation of TiO<sub>2</sub> photocatalysts with CH<sub>3</sub>OH for enhanced water splitting: A computational and X-ray study” **Applied Surface Science**, Vol. 488, pp546 (2019) (SCI, IF=5.155).
10. C.J. Chang\*, **Y.G. Lin**\*, P.Y. Chao, J.K. Chen, “AgI-BiOI-graphene composite photocatalysts with enhanced interfacial charge transfer and photocatalytic H<sub>2</sub> production activity” **Applied Surface Science**, Vol. 469, pp703 (2019) (SCI, IF=5.155).
11. C.J. Chang\*, **Y.G. Lin**\*, H.T. Weng, Y.H. Wei, “Photocatalytic hydrogen production from glycerol solution at room temperature by ZnO-ZnS/graphene photocatalysts” **Applied Surface Science**, Vol. 451, pp198 (2018) (SCI, IF=5.155).
12. Y.C. Chen, Y.K. Hsu, R. Popescu, D. Gerthsen, **Y.G. Lin**, C. Feldmann\*, “Au@Nb@HxK1-xNbO<sub>3</sub> nanopeapods with nearinfrared active plasmonic hot-electron injection for water splitting” **Nature Communications**, Vol. 9, pp232 (2018) (SCI, IF=12.353).
13. S.H. Tsai, S. Basu, C.Y. Huang, L.C. Hsu, **Y.G. Lin**, R.H. Horng\*, “Deep-ultraviolet Photodetectors

Based on Epitaxial ZnGa<sub>2</sub>O<sub>4</sub> Thin Films” Scientific Reports, Vol. 8, pp14056 (2018) (SCI, IF=4.122).

14. H.C. Chiu, W.H. Huang, L.C. Hsu, **Y.G. Lin**, Y.H. Lai, C.Y. Lin\*, “Calcium containing iron oxide as an efficient and robust catalyst in (photo-)electrocatalytic water oxidation at neutral pH” **Sustainable Energy & Fuels**, Vol. 2, pp271 (2018).
15. K.S. Lin\*, **Y.G. Lin**, H.W. Cheng, Y.H. Haung, “Preparation and characterization of V-Loaded titania nanotubes for adsorption/photocatalysis of basic dye and environmental hormone contaminated wastewaters” **Catalysis Today**, Vol. 307, pp119-130 (2018) (SCI, IF=4.667).
16. C.L. Chiang, K.S. Lin\*, P.J. Hsu, **Y.G. Lin**, “Synthesis and characterization of magnetic zinc and manganese ferrite catalysts for decomposition of carbon dioxide into methane” **International Journal of Hydrogen Energy**, Vol. 42, pp22123-22137 (2017) (SCI, IF=3.582).
17. C.L. Chiang, K.S. Lin\*, S.H. Yu, **Y.G. Lin**, “Synthesis and Characterization of H<sub>3</sub>PW<sub>12</sub>O<sub>40</sub>/Ce<sub>0.1</sub>Ti<sub>0.9</sub>O<sub>2</sub> for Dimethyl Carbonate Formation via Methanol Carbonation” **International Journal of Hydrogen Energy**, Vol. 42, pp22108-22122 (2017) (SCI, IF=3.582).
18. C.L. Chiang, K.S. Lin\*, **Y.G. Lin**, “Preparation and Characterization of Ni<sub>5</sub>Ga<sub>3</sub> for Methanol Formation via CO<sub>2</sub> Hydrogenation” **Topics in Catalysis**, Vol. 60, pp685-696 (2017) (SCI, IF=2.486).
19. T.T. Wang, P. Raghunath, **Y.G. Lin**, M.C. Lin\*, “Synergistic Effect of Hydrogenation and Thiocyanate Treatments on Ag-Loaded TiO<sub>2</sub> Nanoparticles for Solar-to-Hydrogen Conversion” **J. Phys. Chem. C**, Vol. 121, pp9681-9690 (2017).
20. Y.C. Chen, J.H. Hsu, **Y.G. Lin**, Y.K. Hsu\*, “Silver Nanowires on Coffee Filter as Dual-sensing Functionality for Efficient and Low-cost SERS Substrate and Electrochemical Detection” **Sensors & Actuators B: Chemical**, Vol. 245, pp189-195 (2017) (SCI, IF=5.401; Ranking: 4/27, Electrochemistry).
21. Y.C. Chen, Z.B. Chen, **Y.G. Lin**, Y.K. Hsu\*, “Synthesis of Copper Phosphide Nanotube Arrays as Electrodes for Asymmetric Supercapacitors” **ACS Sustainable Chemistry & Engineering**, Vol. 5, pp 3863-3870 (2017) (SCI, IF=5.951; Ranking: 9/135, Engineering, Chemical).
22. Y.C. Chen, **Y.G. Lin**, Y.K. Hsu\*, “Biomimicry of Cuscuta Electrode Design Endows Hybrid Capacitor with Ultrahigh Energy Density Exceeding 2 mWh cm<sup>-2</sup> at a Power Delivery of 25 mW cm<sup>-2</sup>” **Journal of Materials Chemistry A**, Vol. 5, pp 4779-4784 (2017) (SCI, IF=8.867; Ranking: 21/271, Materials Science).
23. Y.C. Chen, J.H. Hsu, Z.B. Chen, **Y.G. Lin**, Y.K. Hsu\*, “Fabrication of Fe<sub>3</sub>O<sub>4</sub> Nanotube Arrays for High-Performance Non-Enzymatic Detection of Glucose” **Journal of Electroanalytical Chemistry**, Vol. 788, pp144-149 (2017) (SCI, IF=3.012; Ranking: 10/27, Electrochemistry).
24. S.G. Zytsev, V.Ya. Pokrovskii, V.F. Nasretdinova, S.V. Zaitsev-Zotov, V.V. Pavlovskiy, A.B. Odobesco, Woei Wu Pai, M.-W. Chu, **Y.G. Lin**, E. Zupanič, H.J.P. van Midden, S. Šturm, E. Tchernychova, A.Prodan, J.C. Bennett, I.R. Mukhamedshin, O.V. Chernysheva, A.P. Menushenkov, V.B. Loginov, M. Abdel-Hafiez, B.A. Loginov, A.N. Titov, “NbS<sub>3</sub> – a unique quasi one-dimensional conductor with three charge density wave transitions” **Physical Review B**, Vol. 95, pp035110 (2017). (IF=3.836, Ranking: 16/67, Physics, Condensed Matter).
25. Y.K. Hsu\*, Z.B. Chen, Y.C. Chen, **Y.G. Lin**\*, “Room-temperature Fabrication of Cu Nanobrushes for an

- Effective Surface-enhanced Raman Scattering Substrate” **CrystEngComm**, Vol. 18, pp8284-8290 (2016). (IF=3.474, Ranking: 5/26, Crystallography).
26. **Y.G. Lin\***, Y.K. Hsu\*, Y.C. Lin, Y.C. Chen, “Hierarchical Fe<sub>2</sub>O<sub>3</sub> nanotube/nickel foam electrodes for electrochemical energy storage” **Electrochimica Acta**, Vol. 216, pp287-294 (2016). (IF=4.798; Ranking: 3/27, Electrochemistry).
  27. **Y.G. Lin\***, Y.K. Hsu\*, Y.C. Lin, Y.C. Chen, “Electrodeposited Fe<sub>2</sub>TiO<sub>5</sub> Nanostructures for Photoelectrochemical Oxidation of Water” **Electrochimica Acta**, Vol. 213, pp898-903 (2016). (IF=4.798; Ranking: 3/27, Electrochemistry).
  28. **Y.G. Lin\***, Y.K. Hsu\*, Y.C. Lin, Y.H. Cheng, S.Y. Chen, Y.C. Chen, “Synthesis of Cu<sub>2</sub>O Nanoparticle Films at Room temperature for Solar Water Splitting” **Journal of Colloid and Interface Science**, Vol. 471, pp76-80 (2016). (IF=4.233; Ranking: 41/144, CHEMISTRY, PHYSICAL).
  29. Y.C. Chen, **Y.G. Lin\***, L.C. Hsu, A. Tarasov, P.T. Chen, M. Hayashi, J. Ungelenk, Y.K. Hsu\*, C. Feldmann\*, “β-SnWO<sub>4</sub> Photocatalyst with Controlled Morphological Transition of Cubes to Spikecubes” **ACS Catalysis**, Vol. 6, pp2357-2367 (2016). (IF=10.614, Ranking: 11/144, Chemistry, Physical). (Selected as the Journal Cover)
  30. C.P. Lee, W.F. Chen, T. Billo, **Y.G. Lin**, F.Y. Fu, S. Samireddi, C.H. Lee, J.S. Hwang, K.H. Chen, L.C. Chen, “Beaded stream-like CoSe<sub>2</sub> nanoneedle array for efficient hydrogen evolution electrocatalysis” **Journal of Materials Chemistry A**, Vol. 4, pp4553-4561 (2016). (IF=8.867; Ranking: 16/144, Chemistry, Physical).
  31. **Y.G. Lin\***, Y.K. Hsu\*, C.J. Chuang, Y.C. Lin, Y.C. Chen, “Thermally Activated Cu/Cu<sub>2</sub>S/ZnO Nanoarchitectures with Surface-Plasmon-Enhanced Raman Scattering” **Journal of Colloid and Interface Science**, Vol. 464, pp66-72 (2016). (IF=4.233; Ranking: 41/144, CHEMISTRY, PHYSICAL).
  32. Y.K. Hsu\*, Y.C. Chen, **Y.G. Lin\***, “Novel ZnO/Fe<sub>2</sub>O<sub>3</sub> Core-shell Nanowires for Photoelectrochemical Water Splitting” **ACS Applied Materials & Interfaces**, Vol. 7, pp14157-14162 (2015). (IF=7.504; Ranking: 26/251, Materials Science, Multidisciplinary).
  33. Y.K. Hsu\*, Y.C. Chen, and **Y.G. Lin\***, “Spontaneous Formation of CuO Nanosheets on Cu Foil for H<sub>2</sub>O<sub>2</sub> Detection” **Applied Surface Science**, Vol. 354, pp85-89 (2015). (IF=3.387; Ranking: 2/18, Materials Science, Coatings & Films).
  34. Y.K. Hsu\*, J.R. Wu, M.H. Chen, Y.C. Chen, and **Y.G. Lin\***, “Fabrication of Homojunction Cu<sub>2</sub>O Solar Cells by Electrochemical Deposition” **Applied Surface Science**, Vol. 354, pp8-13 (2015). (IF=3.387; Ranking: 2/18, Materials Science, Coatings & Films).
  35. Y.C. Chang, S.N. Hsiao\*, S.H. Liu, S.H. Su, K.F. Chiu, W.C. Hsieh, S.K. Chen, **Y.G. Lin\***, H.Y. Lee, C. K. Sung, and J.G. Duh\*, “Effect of L12 ordering in antiferromagnetic Ir-Mn epitaxial layer on exchange bias of FePd films” **Journal of Applied Physics**, Vol. 117, pp17D154 (2015). (IF=2.068; Ranking: 37/125, PHYSICS, APPLIED)
  36. Y.K. Hsu\*, H.H. Lin, M.H. Chen, Y.C. Chen, and **Y.G. Lin\***, “Polarity-dependent Performance of p-Cu<sub>2</sub>O/n-ZnO Solar Cells” **Electrochimica Acta**, Vol. 144, pp295-299 (2014). (IF=4.086; Ranking:

4/27, Electrochemistry)

37. Y.K. Hsu\*, Y.C. Chen, and **Y.G. Lin**\*, "Synthesis of CuS Nanowire Arrays for High-performance Supercapacitors" **Electrochimica Acta**, Vol. 139, pp401-407 (2014). (IF=4.086; Ranking: 4/27, Electrochemistry)
38. **Y.G. Lin**\*, Y.K. Hsu, Y.C. Chen, B.W. Lee, J.S. Hwang, L.C. Chen\*, and K.H. Chen\*, "Cobalt-Phosphate-Assisted Photoelectrochemical Water Oxidation by Arrays of Molybdenum-Doped Zinc Oxide Nanorods" **ChemSusChem**, Vol. 7, pp2748-2754 (2014). (IF=7.117; Ranking: 17/148, Chemistry, Multidisciplinary)
39. Y.C. Chen, **Y.G. Lin**\*, Y.K. Hsu\*, S.C. Yen, K.H. Chen, and L.C. Chen\*, "Novel Iron Oxyhydroxide Lepidocrocite Nanosheet as Ultrahigh Power Density Anode Material for Asymmetric Supercapacitors" **Small**, Vol. 10, pp3803-3810 (2014). (IF=7.514; Ranking: 17/251, Materials Science, Multidisciplinary)
40. S.Y. Fu, Y.K. Hsu\*, M.H. Chen, C.J. Chuang, Y.C. Chen, and **Y.G. Lin**\*, "Silver-decorated hierarchical cuprous oxide micro/nanospheres as highly effective surface-enhanced Raman scattering substrates" **Optics Express**, Vol. 22, pp14617-14624 (2014). (IF=3.525; Ranking: 6/82, Optics) (Reprinted in the Virtual Journal for Biomedical Optics. See volume 9, issue 8 (Aug. 7, 2014))
41. **Y.G. Lin**\*, Y.C. Chen, J.T. Miller, L.C. Chen\*, K.H. Chen, and Y.K. Hsu\*, "Hierarchically Porous Calcium-containing Manganese Dioxide Nanorod Bundles with Superior Photoelectrochemical Activity" **ChemCatChem**, Vol. 6, pp1684-1690 (2014). (IF=5.044; Ranking: 26/136, Chemistry Physical)
42. Y.K. Hsu\*, H.H. Lin, J.R. Wu, M.H. Chen\*, Y.C. Chen, and **Y.G. Lin**, "Electrochemical Growth and Characterization of p-Cu<sub>2</sub>O Thin Film on n-ZnO Nanorods for Solar Cell Application" **RSC Advances**, Vol. 4, pp7655-7659 (2014). (IF=3.708; Ranking: 35/148, Chemistry Multidisciplinary)
43. Y.K. Hsu\*, S.Y. Fu, M.H. Chen, Y.C. Chen, and **Y.G. Lin**, "Synthesis of Pt Nanoparticles/ZnO Nanorods Array for Photoelectrochemical Water Splitting" **Electrochimica Acta**, Vol. 120, pp1-5 (2014). (IF=4.086; Ranking: 4/27, Electrochemistry)
44. **Y.G. Lin**, Y.K. Hsu, A.M. Basilio, Y.T. Chen, K.H. Chen\*, and L.C. Chen\*, "Photoelectrochemical activity on Ga-polar and N-polar GaN surfaces for energy conversion" **Optics Express**, Vol. 22, ppA21-A27 (2014). (IF=3.525; Ranking: 6/82, Optics)
45. Y.K. Hsu, C.H. Yu, H.H. Lin, Y.C. Chen, and **Y.G. Lin**, "Template Synthesis of Copper Oxide Nanowires for Photoelectrochemical Hydrogen Generation" **Journal of Electroanalytical Chemistry**, Vol. 704, pp19-23 (2013). (IF: 2.672; Ranking: 23/75, Chemistry, Analytical)
46. Y.K. Hsu, Y.C. Chen, **Y.G. Lin**, L.C. Chen and K.H. Chen, "Direct-growth of PEDOT NWs/CC Nanoelectrode for Electrochemical Capacitor in Neutral Electrolyte" **Journal of Power Sources**, Vol. 242, pp718-724 (2013). (IF: 4.675; Ranking: 3/26, Electrochemistry)
47. Y.K. Hsu, C.H. Yu, Y.C. Chen, and **Y.G. Lin**, "Fabrication of Coral-like Nanoelectrode for Solar Water Splitting" **Journal of Power Sources**, Vol. 242, pp541-547 (2013). (IF: 4.675; Ranking: 3/26, Electrochemistry)
48. Y.K. Hsu, C.H. Yu, Y.C. Chen, and **Y.G. Lin**, "Synthesis of Novel Cu<sub>2</sub>O Micro/Nanostructural

- Photocathode for Solar Water Splitting*” **Electrochimica Acta**, Vol. 105, pp62-68 (2013). (IF: 3.777; Ranking: 6/26, Electrochemistry)
49. J.S. Hwang, T.Y. Liu, S. Chattopadhyay, G.M. Hsu, A.M Basilio, H.W. Chen, Y.K. Hsu, W.H. Tu, **Y.G. Lin**, K.H. Chen, C.C. Li, S.B. Wang, H.Y. Chen, and L.C. Chen, ”*Growth of  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> and GaN Nanowires on GaN for Photoelectrochemical Hydrogen Generation*” **Nanotechnology**, Vol. 24, pp055401-055411 (2013). (IF: 3.842; Ranking: 17/127, Physics)
50. H.C. Hsu, I. Shown, H.Y. Wei, Y.C. Chang, H.Y. Du, **Y.G. Lin**, C.A. Tseng, C.H. Wang, L.C. Chen, Y.C. Lin, and K.H. Chen, ”*Graphene Oxide as a Promising Photocatalyst for CO<sub>2</sub> to Methanol Conversion*” **Nanoscale**, Vol. 5, pp262-268 (2013). (IF: 6.233; Ranking: 19/239, Materials Science)
51. C.K. Lin, **Y.G. Lin**, T.P. Wu, H.M. Barkholtz, Q. Lin, H. Wei, D.L. Brewes, J.T. Miller, D.J. Liu, Y. Ren, Y. Ito, and T. Xu, ”*Direct Synthesis of Bimetallic Pd<sub>3</sub>Ag Nanoalloys from Bulk Pd<sub>3</sub>Ag Alloy*” **Inorganic Chemistry**, Vol. 51, pp13281-13288 (2012). (IF: 4.593; Ranking: 5/43, Chemistry, Inorganic & Nuclear)
52. Y.K. Hsu, C.H. Yu, Y.C. Chen, and **Y.G. Lin**, ”*Hierarchical Cu<sub>2</sub>O Photocathodes with Nano/microspheres for Solar Hydrogen Generation*” **RSC Advances**, Vol. 2, pp12455-12459 (2012). (IF: 2.562; Ranking: 46/152, Chemistry, Multidisciplinary)
53. **Y.G. Lin**\*, C.K. Lin, J.T. Miller, Y.K. Hsu, Y.C. Chen, L.C. Chen, and K.H. Chen, ”*Photochemically Active Reduced Graphene Oxide with Controllable Oxidation Level*” **RSC Advances**, Vol. 2, pp11258-11262 (2012). (IF: 2.562; Ranking: 46/152, Chemistry, Multidisciplinary)
54. **Y.G. Lin**, Y.K. Hsu, Y.C. Chen, L.C. Chen, S.Y. Chen, and K.H. Chen, ”*Visible-Light-Driven Photocatalytic Carbon-doped Porous ZnO Nanoarchitectures for Solar Water-Splitting*” **Nanoscale**, Vol. 4, pp6515-6519 (2012). (IF: 6.233; Ranking: 19/239, Materials Science)
55. **Y.G. Lin**\*, Y.K. Hsu, Y.C. Chen, S.B. Wang, J.T. Miller, L.C. Chen, and K.H. Chen, ”*Plasmonic Ag@Ag<sub>3</sub>(PO<sub>4</sub>)<sub>1-x</sub> Nanoparticle Photosensitized ZnO Nanorod-Array Photoanodes for Water Oxidation*” **Energy & Environmental Science**, Vol. 5, pp8917-8922 (2012). (IF: 11.653; Ranking: 2/209, Environmental Sciences)
56. Y.K. Hsu, Y.C. Chen, and **Y.G. Lin**, ”*Characteristics and electrochemical performances of lotus-like CuO/Cu(OH)<sub>2</sub> hybrid material electrodes*” **Journal of Electroanalytical Chemistry**, Vol. 673, pp43-47 (2012). (IF: 2.672; Ranking: 23/75, Chemistry, Analytical)
57. Y.K. Hsu, Y.C. Chen, **Y.G. Lin**, L.C. Chen, and K.H. Chen, ”*High-cell-voltage supercapacitor of carbon nanotube/carbon cloth operating in neutral aqueous solution*” **Journal of Materials Chemistry**, Vol. 22, pp3383-3387 (2012). (IF: 6.101; Ranking: 17/231)
58. Y.K. Hsu, Y.C. Chen, **Y.G. Lin**, L.C. Chen, and K.H. Chen, ”*Birnessite-type manganese oxides nanosheets with hole acceptor assisted photoelectrochemical activity in response to visible light*” **Journal of Materials Chemistry**, Vol. 22, pp2733-2739 (2012). (IF: 6.101; Ranking: 17/231)
59. Y.C. Chen, Y.K. Hsu, **Y.G. Lin**, L.C. Chen, and K.H. Chen, ”*Spontaneous Synthesis and Electrochemical Characterization of Nanostructured MnO<sub>2</sub> on Nitrogen-incorporated Carbon*”

Nanotubes” **International Journal of Electrochemistry**, Vol. 2012, Article ID 475417, 10 pages (2012).

60. H. D. Trinh, Y. C. Lin, H. C. Wang, C. H. Chang, K. Kakushima, H. Iwai, T. Kawanago, **Y. G. Lin**, C. M. Chen, Y. Y. Wong, G. N. Huang, M. Hudait, and E. Y. Chang, ” *Effect of Postdeposition Annealing Temperatures on Electrical Characteristics of Molecular-Beam-Deposited HfO<sub>2</sub> on n-InAs/InGaAs Metal–Oxide–Semiconductor Capacitors*” **Applied Physics Express**, Vol. 5, pp021104 (2012). (IF: [2.731](#); Ranking: 22/127, Physics, Applied)
61. Y.K. Hsu, **Y.G. Lin** and Y.C. Chen, ”*Polarity-dependent photoelectrochemical activity in ZnO nanostructures for solar water splitting*” **Electrochemistry Communications**, Vol. 13, pp1383-1386 (2011). (IF: [4.859](#); Ranking: 3/27, Electrochemistry)
62. Y.K. Hsu, **Y.G. Lin** and Y.C. Chen, ” *One-pot synthesis of CuFeSe<sub>2</sub> cuboid nanoparticles*” **Materials Research Bulletin**, Vol. 46, pp2117-2119 (2011). (IF: [2.105](#); Ranking: 70/239, Materials Science, Multidisciplinary)
63. Y.C. Chen, Y.K. Hsu, **Y.G. Lin**, Y.K. Lin, Y.Y. Hong, L.C. Chen, and K.H. Chen, ”*Highly flexible supercapacitors with manganese oxide nanosheet/carbon cloth electrode*” **Electrochimica Acta**, Vol. 56, pp7124-7130 (2011). (IF: [3.777](#); Ranking: 6/26, Electrochemistry)
64. C.C. Li, R.J. Lin, H.P. Lin, Y.K. Lin, **Y.G. Lin**, C.C. Chang, L.C. Chen, and K.H. Chen, ”*Catalytic performance of plate-type Cu/Fe nanocomposites on ZnO nanorods for oxidative steam reforming of methanol*” **Chemical Communications**, Vol. 47, pp1473-1475 (2011). (IF: [6.378](#); Ranking: 19/152, Chemistry, Multidisciplinary)
65. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, L.C. Chen, and K.H. Chen, ”*Microwave-Activated CuO Nanotip/ZnO Nanorod Nanoarchitectures for Efficient Hydrogen Production*” **Journal of Materials Chemistry**, Vol. 21, pp324-326 (2011). (IF: [6.101](#); Ranking: 17/231)
66. Y.K. Hsu, Y.C. Chen, **Y.G. Lin**, L.C. Chen, and K.H. Chen, ”*Reversible phase transformation of MnO<sub>2</sub> nanosheets in an electrochemical capacitor investigated by in situ Raman spectroscopy*” **Chemical Communications**, Vol. 47, pp1252-1254 (2011). (IF: [6.378](#); Ranking: 19/152, Chemistry, Multidisciplinary)
67. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, L.C. Chen, and K.H. Chen, ”*O<sub>2</sub> Plasma-activated CuO-ZnO Inverse Opals as High-performance Methanol Microreformer*” **Journal of Materials Chemistry**, Vol. 20, pp10611-10614 (2010). (IF: [6.101](#); Ranking: 17/231)
68. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, Y.K. Lin, L.C. Chen, and K.H. Chen, ”*Nanostructured Zinc Oxide Nanorods with Copper Nanoparticles as a Microreformation Catalyst*” **Angewandte Chemie International Edition**, Vol. 48, pp7586-7590 (2009). (IF:[13.734](#); Ranking: 7/152, Chemistry, Multidisciplinary) (Selected as "Hottest Articles in Catalysts" by Wiley)
69. Y.K. Lin, Y.H. Su, Y.H. Huang, C.J. Hsu, Y.K. Hsu, **Y.G. Lin**, K.H. Huang, S.Y. Chen, L.C. Chen, and K.H. Chen, ”*Efficient Hydrogen Production Using Cu-based Catalysts Prepared via Homogeneous Precipitation*” **Journal of Materials Chemistry**, Vol. 19, pp9186-9194 (2009). (IF: [6.101](#); Ranking:



17/231)

70. C.L. Sun, Y.K. Hsu, C. Bock, **Y.G. Lin**, E. A. Baranova, X.H. Wu, L.C. Chen, K.H. Chen, and B. MacDougall, “*Ternary PtRuNi Nanocatalysts Supported on N-doped Carbon Nanotubes: Deposition Process, Materials Characterization, and Electrochemistry*” **Journal of The Electrochemical Society**, Vol. 156, ppB1249-B1252 (2009). (IF: 2.588; Ranking: 1/17, Materials science, Coatings & Films)
71. Y.K. Hsu, J.L. Yang, **Y.G. Lin**, S.Y. Chen, L.C. Chen, and K.H. Chen, “*Efficient Synthesis of PtRu/CNTs/Carbon Cloth Electrode for the Anodic Oxidation of Methanol*” **Diamond and Related Materials**, Vol. 18, pp557-562 (2009). (IF: 2.092; Ranking: 85/239, Materials Science, Multidisciplinary)
72. **Y.G. Lin**, Y.K. Hsu, C.T. Wu, S.Y. Chen, K.H. Chen, and L.C. Chen, “*Effects of nitrogen-doping on the microstructure, bonding and electrochemical activity of carbon nanotubes*” **Diamond and Related Materials**, Vol.18, pp433-437 (2009). (IF: 2.092)
73. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, K.H. Chen, and L.C. Chen, “*Novel Copper-Zinc Oxide Arrayed Nanoatalysts for Hydrogen Production Applications*” **ECS Transactions**, Vol. 13, pp165-168 (2008).

### **Invited Book Chapters:**

1. “*Nanomaterials in photovoltaics and photochemical cells*” **Y.G. Lin**, Y.K. Hsu, J.S. Hwang, K.H. Chen, and L.C. Chen (under revision).
2. “*Synchrotron X-ray Spectroscopies on Photocatalysts for Water Splitting*” L.C. Hsu and **Y.G. Lin** (under revision).

### **Conferences**

#### **Oral**

1. **Y.G. Lin\***, Y.C. Lin, C.K. Peng, **2019**, “*In-situ studies of supercapacitors in operando condition using synchrotron X-ray*”, **Materials Research Meeting (MRM)**, Dec. 10-14, Yokohama, Japan. (**Invited talk**)
2. **Y.G. Lin\***, **2019**, “*In-situ/operando studies of energy materials using synchrotron X-ray*”, **The 10th Asian Conference on Electrochemical Power Sources**, Nov. 24-27, Kaohsiung, Taiwan. (**Invited talk**)
3. **Y.G. Lin\***, **2019**, “*In-situ/operando studies of energy materials using synchrotron X-ray*”, **Annual meeting of the Japan Society of Vacuum and Surface Science**, Oct. 28-30, Tsukuba, Japan. (**Invited talk**)
4. **Y.G. Lin\***, **2019**, “*Synchrotron-based X-ray spectroscopy in energy materials*”, **EITA Conference on New Materials**, Sep. 11-12, Hsinchu, Taiwan. (**Invited talk**)
5. **Y.G. Lin\***, **2019**, “*Synchrotron-based X-ray spectroscopy in energy materials*”, **Materials Challenges in Alternative and Renewable Energy**, Aug. 19-23, Jeju Island, Korea. (**Invited talk**)
6. **Y.G. Lin\***, **2019**, “*In-situ studies of energy materials in operando condition using synchrotron X-ray*”,

**Asia Pacific Society for Materials Research 2019 Annual Meeting**, Jul. 26-29, Hokkaido, Japan.  
(Invited talk)

7. **Y.G. Lin\***, 2019, “*Construction of complex nanostructures for efficient solar energy conversion*”, **Third International Conference on Catalysis and Chemical Engineering**, Feb. 25-27, Houston, USA.
8. **Y.G. Lin\***, 2018, “*Titanium Oxide Nanoheterostructures for Photoconversion Applications*”, **EMN Auckland Meeting**, Dec. 17-21, Auckland, New Zealand. (Invited talk)
9. Y.C. Lin, **Y.G. Lin\***, L.C. Hsu, P.Y. Peng, S.Y. Chen, 2018, “*Probing the Mechanism of Modified ZnO Nanorod Photoanode for Enhanced Photoelectrochemical Water Splitting*”, **The annual meeting of Taiwan Vacuum Society**, Nov. 02, Chiayi, Taiwan. (Oral Presentation Award)
10. Po-Yang Peng, **Yan-Gu Lin\***, Hsin-Yi Lee, Yu-Chang Lin, 2018, “*Fabrication of Carbon-loaded FeOOH/Cu<sub>2</sub>O nanowires for improvement in solar hydrogen application*”, **The annual meeting of Taiwan Vacuum Society**, Nov. 02, Chiayi, Taiwan.
11. C.L. Chiang, K.S. Lin, S.S. Dwity, **Y.G. Lin\***, 2018, “*Enhancement of CO<sub>2</sub> Adsorption and Separation for Non-porous Zn/Co Azolate Frameworks via Ethanol-induced Structural Transformation*”, **The annual meeting of Taiwan Vacuum Society**, Nov. 02, Chiayi, Taiwan.
12. **Y.G. Lin\***, 2018, “*Effects of Nanoscale Interfacial Design on Enhanced Photoelectrocatalytic Activity at Modified Photoelectrodes*”, **Materials Challenge in Alternative and Renewable Energy**, Aug. 20-23, Vancouver, Canada.
13. **Y.G. Lin\***, 2018, “*Interfacial Studies of Energy Materials Using Synchrotron X-ray Spectroscopy*”, **International Symposium for Advanced Materials Research**, Aug. 16-19, Sun Moon Lake, Taiwan. (Keynote Speaker)
14. **Y.G. Lin\***, 2018, “*Interfacial Studies of Energy Materials Using Synchrotron X-ray Spectroscopy*”, **55<sup>th</sup> Korean Vacuum Society Summer National Conference**, Aug. 08-10, Gangwon-do, Korea. (Invited talk)
15. **Y.G. Lin\***, 2018, “*Engineering oxide-based photoelectrodes for solar fuels*”, **World Congress & Expo on Chemical Engineering & Catalysis**, July 23-25, Osaka, Japan. (Invited talk)
16. **Y.G. Lin\***, 2018, “*Materials Design for Solar-Driven Water Splitting*”, **Symposium for International Network Joint Research Center for Materials and Devices**, May 18-20, Hsinchu, Taiwan. (Invited talk)
17. **Y.G. Lin\***, 2018, “*Interfacial Engineering of Semiconductor Hybrids for Water Oxidation*”, **NanoWorld Conference**, April 23-25, San Francisco, USA.
18. **Y.G. Lin\***, 2018, “*Interfacial Engineering of Semiconductor Hybrids for Solar Water Splitting*”, **Energy Materials Nanotechnology Las Vegas Meeting**, Feb. 25-March 01, Orlando, USA. (Invited talk)
19. Po-Yang Peng, **Yan-Gu Lin\***, Hsin-Yi Lee, Yu-Chang Lin, Jei-Wen LO, 2018, “*Fabrication of CQDs-loaded FeOOH/Cu<sub>2</sub>O nanowires for improvement in solar hydrogen application*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
20. Yu-Chang Lin, **Yan-Gu Lin\***, Liang-Ching Hsu, Po-Yang Peng, Yu-Hsueh Chang, San-Yuan Chen,

- 2018, “*Modified ZnO Nanorod Photoanode with Enhanced Photoelectrochemical Performance*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
21. **Yan-Gu Lin\***, Liang-Ching Hsu, Ming-Chang Lin, 2018, “*The Enhancement of Hydrogenation and Thiocyanate Treatments on Ag-Loaded TiO<sub>2</sub> Nanoparticles for Hydrogen Evolution*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
  22. Yu-Hsueh Chang, Yu-Chang Lin, Liang-Ching Hsu, Po-Yang Peng, **Yan-Gu Lin\***, 2018, “*Hybrid electrode materials for electrochemical supercapacitors*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
  23. Man-Ju Tseng, **Yan-Gu Lin\***, and San-Yuan Chen, 2018, “*Vanadium nitride for electrochemical supercapacitors*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
  24. Jei-Wen Lo, Hsin-Yi Lee, **Yan-Gu Lin\***, Chih-Ming Lin, Po-Yang Peng, 2018, “*Characterization of Ag-loaded FeOOH/Cu<sub>2</sub>O as Photocathode for photoelectrochemical and X-ray techniques analysis*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
  25. **Y.G. Lin\***, 2017, “*Engineering oxide-based hybrid nanomaterials for solar fuels*”, **Energy Materials Nanotechnology Orlando Meeting**, Dec. 04-08, Orlando, USA. (**Invited talk**)
  26. **Yan-Gu Lin\***, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, 2017, “*Interfacial Modification of Heterojunction Metal Oxide Photoelectrodes for Efficient Solar Water Splitting*”, **IUMRS-ICA Meeting**, Nov. 05-09, Taipei, Taiwan. (**Invited talk**)
  27. Y. C. Lin, **Y.G. Lin\***, L. C. Hsu, P. Y. Peng, Y. H. Chang, and S. Y. Chen, 2017, “*Sandwich Nanostructure with Alloy Nanoparticle as Plasmonic Photosensitizer for Solar Hydrogen Application*”, **IUMRS-ICA Meeting**, Nov. 05-09, Taipei, Taiwan.
  28. P. Y. Peng, **Y.G. Lin\***, H. Y. Lee, Y. C. Lin, L. C. Hsu, Y. H. Chang, and S. Y. Chen, 2017, “*Engineering Surface Structures of Cu<sub>2</sub>O-based Photocathode for Efficient Solar Water Splitting*”, **IUMRS-ICA Meeting**, Nov. 05-09, Taipei, Taiwan.
  29. **Yan-Gu Lin\***, 2017, “*Design of Heterostructure Photoelectrodes for Solar Fuels*”, **Global Conference on Catalysis and Reaction Engineering**, Oct. 19-21, Las Vegas, USA.
  30. Yu-Chang Lin, **Y.G. Lin\***, Liang-Ching Hsu, Po-Yang Peng, Yu-Hsueh Chang, San-Yuan Chen, 2017, “*Plasmonic Photocathodes for Photocatalytic Water Splitting with Visible Light*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan. (**Oral Presentation Award**)
  31. **Yan-Gu Lin\***, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, Kai-An Tsai, 2017, “*Investigation of surface and interface properties in photoelectrodes for solar fuels*”, **NanoWorld Conference**, April 03-05, Boston, USA.
  32. Po-Yang Peng, **Yan-Gu Lin\***, Hsin-Yi Lee, Yu-Hsueh Chang, Yu-Chang Lin, San-Yuan Chen, 2017, “*Fabrication of Novel FeOOH/Cu<sub>2</sub>O nanowires for improvement in solar hydrogen application*”, **NanoWorld Conference**, April 03-05, Boston, USA.

33. Yu-Chang Lin, San-Yuan Chen, **Yan-Gu Lin\***, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, **2017**, “*Sandwich Structure as Photocathode for Solar Hydrogen Application*”, **NanoWorld Conference**, April 03-05, Boston, USA.
34. **Yan-Gu Lin\***, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, **2017**, “*Interface engineering in hybrid nanostructures towards improved photocatalysis*”, **Materials Challenge in Alternative and Renewable Energy**, Feb. 20-24, Jeju Island, Korea. **(Invited talk)**
35. Kai-An Tsai, **Yan-Gu Lin\***, Yung-Jung Hsu\*, **2017**, “*Interfacial charge dynamics of N-doped graphene quantum dot-modified BiVO<sub>4</sub> Photoanodes*”, **Materials Challenge in Alternative and Renewable Energy**, Feb. 20-24, Jeju Island, Korea.
36. Yu-Chang Lin, San-Yuan Chen, **Yan-Gu Lin\***, **2017**, “*Alloy-inserted p-n junction as photocathode for solar hydrogen application*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
37. **Y.G. Lin\***, Y.C. Lin, Y.H. Chang, L.C. Hsu, P.Y. Peng, **2016**, “*Metal Oxide Nanoheterostructures: Interfacial Charge Carrier Dynamics and Solar Hydrogen Generation*”, **International Symposium on Next-Generation Solar Cells and Soar Energy Conversion**, Nov. 21-24, Hsinchu, Taiwan.
38. **Y.G. Lin\***, Y.C. Lin, Y.H. Chang, L.C. Hsu, P.Y. Peng, **2016**, “*Structure-reactivity relationships of ternary oxide catalysts for solar hydrogen production*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 28, Hsinchu, Taiwan.
39. **Y.G. Lin\***, **2016**, “*Low dimensional oxides and their nano-hybrids for photocatalytic water splitting*”, **SPIE Optics and Photonics**, Aug. 28- Sep. 1, San Diego, USA. **(Invited talk)**
40. **Y.G. Lin\***, Y.C. Lin, and Y.K. Hsu, **2016**, “*Metal Oxide Nanosurfaces for Energy Storage Applications*”, **Energy Materials Nanotechnology Meeting on Batteries**, Feb. 21-25, Orlando, USA. **(Invited talk)**
41. **Y.G. Lin\***, Y.C. Lin, H.J. Lin, Y.H. Chang, **2016**, “*Solar Hydrogen Production under Low Applied Bias Using Oxide Nanomaterials*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 25-27, Kaohsiung, Taiwan.
42. **Y.G. Lin\***, Y.C. Lin, and Y.K. Hsu, **2015**, “*Low Dimensional Oxides and Their Hybrids for Photocatalytic Applications*”, **Energy Materials Nanotechnology Meeting on Photocatalysis**, Nov. 21-24, Las Vegas, USA. **(Invited talk)**
43. **Y.G. Lin\***, H.J. Lin, and Y.C. Lin, **2015**, “*Earth-Abundant Materials for Photocatalytic Water splitting*”, **66<sup>th</sup> Annual Meeting of the International Society of Electrochemistry**, Oct. 4-9, Taipei, Taiwan.
44. **Y.G. Lin\***, **2015**, “*Interfacial Studies of Energy Materials Using Soft X-ray Spectroscopy*”, **21<sup>st</sup> NSRRC Users’ Meeting & Workshops**, Sep. 9-10, Hsinchu, Taiwan. **(Invited talk)**
45. **Y.G. Lin\***, H.J. Lin, and Y.C. Lin, **2015**, “*Nanomaterials for Photoelectrochemical Water Splitting*”, **International Symposium for Advanced Materials Research**, August 16-20, Sun Moon Lake, Taiwan. **(Invited talk)**
46. **Y.G. Lin\***, H.J. Lin, and Y.C. Lin, **2015**, “*Solution-Processed Photoelectrodes for Photoelectrochemical Water Splitting*”, **Light Conference: International Conference on Micro/Nano Optical Engineering**,

August 10-14, Tainan, Taiwan.

47. **Y.G. Lin\***, H.J. Lin, Y.C. Lin, and Y.K. Hsu, **2015**, “*Metal Oxide Nanosurfaces and Hetero-Interfaces for Solar Water Splitting Applications*”, **Taiwan Symposium on Catalysis and Reaction Engineering**, June 25-26, Taipei, Taiwan.
48. **Y.G. Lin\*** and Y.K. Hsu, **2015**, “*Engineering of Oxide Materials for Improved Photoelectrochemical Water Oxidation*”, **227<sup>th</sup> ECS Meeting**, May 24-28, Chicago, USA.
49. **Y.G. Lin\*** and Y.K. Hsu, **2015**, “*Development of Ternary Oxide Photoelectrodes for Efficient Solar Water Splitting*”, **MRS Spring Meeting**, April 6-10, San Francisco, USA.
50. **Y.G. Lin\***, **2015**, “*Study of Novel Nanoarchitectures for Solar-Fuel Application*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 28-30, Hsinchu, Taiwan.
51. **Y.G. Lin\***, Y.K. Hsu, L.C. Chen, and K.H. Chen, **2014**, “*ZnO-based Nanoarchitectures for Enhanced Photoelectrochemical Water Oxidation*”, **MRS Fall Meeting**, Nov. 30-Dec. 5, Boston, USA.
52. **Y.G. Lin\***, **2014**, “*Investigation of Advanced Nanoarchitectures for Solar-Hydrogen Application*”, **The 7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia**, Oct. 5-9, Hsinchu, Taiwan.
53. Y.K. Hsu, C.H. Yu, **Y.G. Lin**, **2014**, “*Facile Synthesis of Cuprous Oxide Nanostructural for Photoelectrochemical Hydrogen Generation*” **7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia**, October 5-9, Hsinchu, Taiwan.
54. S.Y. Fu, Y.K. Hsu, **Y.G. Lin**, **2014**, “*ZnO Nanorods Array Decorate by Pt Nanoparticles in The Application of Water Splitting*” **7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia**, October 5-9, Hsinchu, Taiwan.
55. S.Y. Fu, Y.K. Hsu, **Y.G. Lin**, **2014**, “*Facile synthesis of Cu<sub>2</sub>S nanoarchitectures in application of surface Raman enhanced scattering*”, **SPIE Optics + Photonics**, August 17-21, San Diego, California, USA.
56. C.L. Kuo, Y.K. Hsu, **Y.G. Lin**, **2014**, “*Facile synthesis of p-type Zn-doped  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> films for solar water splitting*”, **SPIE Optics + Photonics**, August 17-21, San Diego, California, USA.
57. **Y.G. Lin\***, Y.K. Hsu, L.C. Chen, and K.H. Chen, **2014**, “*Investigation of Plasmonic Nanoarchitectures for Solar-Hydrogen Application*”, **IUMRS-ICEM Meeting**, June 10-14, Taipei, Taiwan.
58. **Y.G. Lin\***, Y.K. Hsu, L.C. Chen, and K.H. Chen, **2014**, “*Porous Ca-Containing MnO<sub>2</sub> Nanorod Bundles with Superior Photoelectrochemical Activity*”, **MRS Spring Meeting**, April 21-25, San Francisco, USA.
59. **Y.G. Lin\***, Y.K. Hsu, L.C. Chen, and K.H. Chen, **2013**, “*Investigation of Plasmonic Ag@Ag<sub>3</sub>(PO<sub>4</sub>)<sub>1-x</sub>ZnO Nanoarchitectures for Solar-Hydrogen Application*”, **224<sup>th</sup> ECS Meeting**, October 27-November 1, San Francisco, USA. (**Invited talk**)
60. L.C. Chen, **Y.G. Lin**, Y.K. Hsu, and K.H. Chen, **2012**, “*Interface-controlled CuO-ZnO Inverse Opals for Enhanced Hydrogen Production*” **MRS Spring Meeting**, April 9-13, San Francisco, USA.
61. **Y.G. Lin**, Y.C. Chen, Y.K. Hsu, L.C. Chen, and K.H. Chen, **2011**, “*Investigation of Carbon-Modified ZnO Nanostructures for Solar-Hydrogen Application*”, **12<sup>th</sup> IUMRS Meeting**, September 19-22, Taipei, Taiwan.
62. Y.K. Hsu, S.Y. Chen, and **Y.G. Lin**, **2011**, “*Morphology-dependent Photoelectrochemical Activity in*

*ZnO Nanostructures for Solar Water Splitting*”, **International Photonic Conference**, December 8-10, Tainan, Taiwan.

63. **Y.G. Lin**, Y.C. Chen, Y.K. Hsu, L.C. Chen, and K.H. Chen, **2011**, “*High-performance of Carbon-Modification ZnO inverse Opals for Water Splitting*”, **EMRS Spring Meeting**, May 9-13, Nice, France.
64. Y.C. Chen, Y.K. Hsu, **Y.G. Lin**, L.C. Chen, and K.H. Chen, **2011**, “*Fabrication of MnO<sub>2</sub> Nanosheet/N-doped CNT Hybrides for High Performance Supercapacitors*”, **EMRS Spring Meeting**, May 9-13, Nice, France.
65. Y.K. Hsu, S.Y. Chen, and **Y.G. Lin**, **2011**, “*Polarity-dependent Photoelectrochemical Activity in ZnO Nanostructures for Solar Water Splitting*”, **EMRS Spring Meeting**, May 9-13, Nice, France.
66. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, L.C. Chen, and K.H. Chen, **2010**, “*Novel Copper-Zinc Oxide Nanoarchitectures as Microreformation Catalysts for Hydrogen Production*”, **217<sup>th</sup> ECS Meeting**, April 26-30, Vancouver, Canada.
67. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, L.C. Chen, and K.H. Chen, **2009**, “*Morphological Control of Catalytically Active Cu-ZnO Nanostructures for Hydrogen Generation*” **EMRS Spring Meeting**, Jun. 8-12, Strasbourg, France.
68. **Y.G. Lin**, Y.K. Hsu, S.Y. Chen, L.C. Chen, and K.H. Chen, **2008**, “*Binary Nanostructures for Hydrogen Generation*” **Pre-Symposium of 14<sup>th</sup> International Congress on Catalysis**, Jul. 8-12, Kyoto, Japan.
69. **Y.G. Lin**, Y.K. Hsu, Y.K. Lin, C.N. Chuang, S.Y. Chen, L.C. Chen, and K.H. Chen, **2008**, “*Novel Copper-Zinc Oxide Arrayed Nanoatalysts for Hydrogen Production Applications*” **213<sup>th</sup> ECS Meeting**, May 18-22, Phoenix, USA.
70. **Y.G. Lin**, Y.K. Hsu, J.L. Yang, S.Y. Chen, K.H. Chen, and L.C. Chen, **2007**, “*Electrocatalytic activity and structural studies of nitrogen doping effects on array multi-walled carbon nanotube electrodes*” **54<sup>th</sup> AVS Meeting**, Oct. 14-19, Seattle, USA.
71. J.L. Yang, Y.K. Hsu, **Y.G. Lin**, S.Y. Chen, L.C. Chen, and K.H. Chen, **2007**, “*Synthesis and Optimization of Pt-Ru/CN<sub>x</sub>NTs/CC nanocatalysts for methanol electro-oxidation*” **211<sup>th</sup> ECS Spring Meeting**, May 6-10, Chicago, USA.

## **Poster**

1. **Y.G. Lin\***, **2018**, “*Surface Characterization and Modification of Photoelectrode Materials*”, **The annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 16-17, Taichung, Taiwan.
2. C.L. Chiang, K.S. Lin, S.H. Yu, **Y.G. Lin\***, **2018**, “*Improvement of Dimethyl Carbonate Formation via Methanol Carbonation over Vanadium-doped Cu-Ni/AC Catalyst*”, **The annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 16-17, Taichung, Taiwan. **(Poster Award)**
3. Po-Yang Peng, **Yan-Gu Lin\***, Hsin-Yi Lee, Yu-Chang Lin, **2018**, “*Characterization of Carbon-loaded FeOOH/Cu<sub>2</sub>O nanowires photocathode for improvement in photoelectrochemical water splitting*”, **The**

**annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 16-17, Taichung, Taiwan.

4. **Yan-Gu Lin\***, Yu-Chang Lin, Liang-Ching Hsu, Po-Yang Peng, **2018**, “*Novel Photoelectrode Materials for Energy Conversion Application*”, **The annual meeting of Taiwan Vacuum Society**, Nov. 02, Chiayi, Taiwan.
5. L.H. Chen, K.S. Yang, **Yan-Gu Lin\***, C.L. Chen, **2018**, “*Studying The Plasmon-Induced Visible-Light Photocatalytic Activity of Au Nanoparticle-Decorated Hollow Mesoporous TiO<sub>2</sub> from The Viewpoint of X-ray Spectroscopy*”, **The annual meeting of Taiwan Vacuum Society**, Nov. 02, Chiayi, Taiwan. **(Poster Award)**
6. **Y.G. Lin\***, Y.C. Lin, L.C. Hsu, P.Y. Peng, S.Y. Chen, **2018**, “*Complex Nanostructured Materials for Efficient Photocatalysis*”, **24<sup>th</sup> NSRRC Users’ Meeting & Workshops**, Sep. 11-13, Hsinchu, Taiwan.
7. Po-Yang Peng, **Yan-Gu Lin\***, Hsin-Yi Lee, Yu-Chang Lin, Jei-Wen LO, **2018**, “*Characterization of CQDs-loaded FeOOH/Cu<sup>2</sup>O nanowires photocathode for improvement in photoelectrochemical water splitting*”, **24<sup>th</sup> NSRRC Users’ Meeting & Workshops**, Sep. 11-13, Hsinchu, Taiwan.
8. Y.C. Lin, L.C. Hsu, P.Y. Peng, S.Y. Chen, **Yan-Gu Lin\***, **2018**, “*Enhanced Photoelectrochemical Performance of Modified ZnO Nanowire Arrays Using Surface Functionalized Method*”, **24<sup>th</sup> NSRRC Users’ Meeting & Workshops**, Sep. 11-13, Hsinchu, Taiwan. **(Poster Award)**
9. C.K. Peng, J.W. Lo, P.Y. Peng, H.Y. Lee, S.Y. Chen, **Yan-Gu Lin\***, **2018**, “*Probing the mechanism of Ag inserted heterojunction as photocathode for photoelectrochemical water splitting*”, **Taiwan-Japan-US Joint Workshop on Energy Materials for Sustainable Development**, Sep. 03-04, Hsinchu, Taiwan. **(Poster Award)**
10. **Yan-Gu Lin\***, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, San-Yuan Chen, **2018**, “*Complex Nanostructured Materials for Efficient Photocatalysis*”, **Synchrotron Radiation Instrumentation (SRI)**, June 10-15, Taipei, Taiwan.
11. **Yan-Gu Lin\***, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, San-Yuan Chen, **2018**, “*Interfacial Engineering of Semiconductor Hybrids for Solar Water Splitting*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 24-26, Taipei, Taiwan.
12. **Yan-Gu Lin\***, Liang-Ching Hsu, Ming-Chang Lin, **2017**, “*Synergistic Effect of Hydrogenation and Thiocyanate Treatments on Ag-Loaded TiO<sub>2</sub> Nanoparticles for Hydrogen Evolution*”, **IUMRS-ICA Meeting**, Nov. 05-09, Taipei, Taiwan.
13. Yu-Chang Lin, **Y.G. Lin\***, Liang-Ching Hsu, Po-Yang Peng, Yu-Hsueh Chang, San-Yuan Chen, **2017**, “*Plasmonic Photosensitizer Sandwiched Homojunction as Photocathode for Solar Water Splitting*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 27, Tainan, Taiwan. **(Poster Award)**
14. Po-Yang Peng, **Y.G. Lin\***, Yu-Chang Lin, Hsin-Yi Lee, San-Yuan Chen, **2017**, “*Fabrication of Ag-loaded FeOOH/Cu<sub>2</sub>O nanowires for improved solar hydrogen application*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 27, Tainan, Taiwan. **(Poster Award)**
15. Yu-Hsueh Chang, **Yan-Gu Lin\***, **2017**, “*Hybrid electrode materials for electrochemical supercapacitors*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 27, Tainan, Taiwan.

16. Man-Ju Tseng, Yan-Gu Lin\*, and San-Yuan Chen, **2017**, “*Visible-light driven heterojunction photoelectrodes for solar hydrogen*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 27, Tainan, Taiwan.
17. Yan-Gu Lin\*, Liang-Ching Hsu, Ming-Chang Lin, **2017**, “*The Enhancement of Hydrogenation and Thiocyanate Treatments on Ag-Loaded TiO<sub>2</sub> Nanoparticles for Hydrogen Evolution*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 27, Tainan, Taiwan.
18. Y.G. Lin\*, **2017**, “*Photoactive Nanoelectrodes for Improved Solar-Fuel Conversion Systems*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 27, Tainan, Taiwan.
19. Y.G. Lin\*, Y.C. Lin, Y.H. Chang, L.C. Hsu, P.Y. Peng, S.Y. Chen, **2017**, “*Oxide Based Nanosurfaces and Hetero-Interfaces for Solar Harvesting Applications*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan.
20. Yan-Gu Lin\*, Liang-Ching Hsu, Ming-Chang Lin, **2017**, “*The Enhancement of Hydrogenation and Thiocyanate Treatments on Ag-Loaded TiO<sub>2</sub> Nanoparticles for Hydrogen Evolution*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan.
21. Man-Ju Tseng, Yan-Gu Lin\*, and San-Yuan Chen, **2017**, “*Visible-light driven heterojunction photoelectrodes for solar hydrogen*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan.
22. Jei-Wen Lo, Hsin-Yi Lee, Yan-Gu Lin\*, Chih-Ming Lin, **2017**, “*Characterization of ZnO Array as Photoanode for Solar Water Splitting by Synchrotron X-ray Technique*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan.
23. Chun-Kuo Peng, Yan-Gu Lin\*, and Yu-Kuei Hsu, **2017**, “*Characterization of ZnO Array as Photoanode for Solar Water Splitting by Synchrotron X-ray Technique*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan.
24. Po-Yang Peng, Y.G. Lin\*, Jei-Wen Lo, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Hsin-Yi Lee, **2017**, “*Synthesis of Cu<sub>2</sub>O-In<sub>2</sub>O<sub>3</sub>-ZnO Nanowire Arrays as Photoanode for Photoelectrochemical Water Splitting*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan. **(Poster Award)**
25. Yu-Hsueh Chang, Yan-Gu Lin\*, **2017**, “*Biomimicry of Cuscuta electrode design endows hybrid capacitor with high energy density*”, **23<sup>rd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 05-08, Hsinchu, Taiwan. **(Poster Award)**
26. Po-Yang Peng, Yan-Gu Lin\*, Hsin-Yi Lee, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, **2017**, “*Design of Plasmonic Photoelectrodes for Solar Hydrogen*”, **The 8th International Conference on Surface Plasmon Photonics**, May 22-26, Taipei, Taiwan.
27. Yu-Chang Lin, Yan-Gu Lin\*, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, Kai-An Tsai, San-Yuan Chen, **2017**, “*Plasmon-Enhanced Solar Water Splitting Using Sandwich Structure*”, **The 8th International Conference on Surface Plasmon Photonics**, May 22-26, Taipei, Taiwan.
28. Yan-Gu Lin\*, Yu-Hsueh Chang, Yu-Chang Lin, **2017**, “*Fabrication of Hierarchical Cu/Cu<sub>2</sub>S/ZnO Nanoarchitectures for an Effective Surface-enhanced Raman Scattering Substrate*”, **The 7th**



**International Conference on Applied Physics and Mathematics**, Jan. 20-22, Tokyo, Japan.

29. **Yan-Gu Lin\***, Yu-Chang Lin, Yu-Hsueh Chang, Liang-Ching Hsu, Po-Yang Peng, **2017**, “*Investigation of Surface and Interface Properties of Photoelectrocatalysts for Solar Fuels*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
30. Yu-Hsueh Chang, Yu-Chang Lin, Liang-Ching Hsu, Po-Yang Peng, **Yan-Gu Lin\***, **2017**, “*Synthesis of hierarchical iron oxide nanotube/nickel foam electrodes for supercapacitors*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
31. Li-Yen Weng, Yu-Hsueh Chang, Hsin-Yi Lee, **Yan-Gu Lin\***, Chih-Ming Lin, **2017**, “*Preparation and characterization of ZnO arrays and their photocatalytic applications*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
32. Ying-Chu Chen, **Yan-Gu Lin\***, Liang-Ching Hsu, Alexander Tarasov, Po-Tuan Chen, Michitoshi Hayashi, Jan Ungelenk, Yu-Kuei Hsu, and Claus Feldmann, **2017**, “*Controlled Morphological Transition of  $\beta$ -SnWO<sub>4</sub> Photocatalyst*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
33. Yu-Chang Lin, San-Yuan Chen, **Yan-Gu Lin\***, **2017**, “*Alloy-inserted p-n junction as photocathode for solar hydrogen application*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
34. Po-Yang Peng, **Yan-Gu Lin\***, Yu-Hsueh Chang, Yu-Chang Lin, San-Yuan Chen, **2017**, “*Fabrication of P-type Cu<sub>2</sub>O and N-type Fe<sub>2</sub>TiO<sub>5</sub> photoelectrodes for solar hydrogen application*”, **The annual meeting of the Physical Society of Republic of China (PSROC)**, Jan. 16-18, New Taipei, Taiwan.
35. Y.C. Lin, P.Y. Peng, Y.H. Chang, S.Y. Chen, **Y.G. Lin\***, **2016**, “*Application of P-type Cu<sub>2</sub>O and N-type Fe<sub>2</sub>TiO<sub>5</sub> photoelectrodes for solar water splitting*”, **The annual meeting of chemical society**, Dec. 3-4, Taichung, Taiwan.
36. P.Y. Peng, **Y.G. Lin\***, Y.H. Chang, Y.C. Lin, S.Y. Chen, **2016**, “*Core-shell ZnO@Cu-Cu<sub>2</sub>S nanoarchitectures with surface-plasmon-enhanced Raman scattering*”, **The annual meeting of chemical society**, Dec. 3-4, Taichung, Taiwan.
37. Y.C. Lin, S.Y. Chen, **Y.G. Lin\***, **2016**, “*Alloy-inserted p-Cu<sub>2</sub>O and n-Cu<sub>2</sub>O composited photocathode for solar hydrogen application*”, **The annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 19-20, Hsinchu, Taiwan.
38. P.Y. Peng, **Y.G. Lin\***, H.Y. Lee, Y.C. Lin, S.Y. Chen, **2016**, “*Synthesis of P-type Cu<sub>2</sub>O and N-type Fe<sub>2</sub>TiO<sub>5</sub> nanostructures as photoelectrodes for solar hydrogen application*”, **The annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 19-20, Hsinchu, Taiwan.
39. Y.C. Chen, **Y.G. Lin\***, L.C. Hsu, A. Tarasov, P.T. Chen, M. Hayashi, J. Ungelenk, Y.K. Hsu, C. Feldmann, **2016**, “*Morphological Transition of  $\beta$ -SnWO<sub>4</sub> Photocatalyst: Cubes to Spikecubes*”, **The annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 19-20, Hsinchu, Taiwan.
40. Y.H. Chang, **Y.G. Lin\***, Y.C. Lin, S.Y. Chen, **2016**, “*Thermally activated Cu/Cu<sub>2</sub>S/ZnO nanoarchitectures with surface-plasmon-enhanced Raman scattering*”, **The annual conference of**

**Materials Research Society-Taiwan (MRS-T)**, Nov. 19-20, Hsinchu, Taiwan.

41. **Y.G. Lin\***, Y.C. Lin, Y.H. Chang, L.C. Hsu, P.Y. Peng, **2016**, “*Surface and Interface Properties of Metal Oxide Catalysts for Solar Water Splitting*”, **The annual conference of Materials Research Society-Taiwan (MRS-T)**, Nov. 19-20, Hsinchu, Taiwan.
42. Y.C. Lin, S.Y. Chen, **Y.G. Lin\***, **2016**, “*Alloy-inserted p-Cu<sub>2</sub>O and n-Cu<sub>2</sub>O composited photocathode for solar water splitting application*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 28, Hsinchu, Taiwan.
43. P.Y. Peng, **Y.G. Lin\***, Y.H. Chang, Y.C. Lin, S.Y. Chen, **2016**, “*Fabrication of P-type Cu<sub>2</sub>O and N-type Fe<sub>2</sub>TiO<sub>5</sub> photoelectrodes for photoelectrochemical water splitting*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 28, Hsinchu, Taiwan.
44. Y.C. Chen, **Y.G. Lin\***, L.C. Hsu, A. Tarasov, P.T. Chen, M. Hayashi, J. Ungelenk, Y.K. Hsu, C. Feldmann, **2016**, “*β-SnWO<sub>4</sub> Photocatalyst with Controlled Morphological Transition*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 28, Hsinchu, Taiwan.
45. Y.H. Chang, **Y.G. Lin\***, Y.C. Lin, S.Y. Chen, **2016**, “*Hierarchical Cu-Cu<sub>2</sub>S/ZnO nanoarchitectures with surface-plasmon-enhanced Raman scattering*”, **The annual meeting of Taiwan Vacuum Society**, Oct. 28, Hsinchu, Taiwan. **(Poster Award)**
46. Y.C. Lin, S.Y. Chen, **Y.G. Lin\***, **2016**, “*Alloy-inserted p-Cu<sub>2</sub>O and n-Cu<sub>2</sub>O composited photocathode for solar hydrogen application*”, **22<sup>nd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 20-22, Hsinchu, Taiwan.
47. P.Y. Peng, Y.H. Chang, H.Y. Lee\*, **Y.G. Lin\***, **2016**, “*Novel FeOOH/Cu<sub>2</sub>O nanowires for improvement in Photoelectrochemical Water Splitting*”, **22<sup>nd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 20-22, Hsinchu, Taiwan.
48. Y.C. Chen, **Y.G. Lin\***, L.C. Hsu, A. Tarasov, P.T. Chen, M. Hayashi, J. Ungelenk, Y.K. Hsu, C. Feldmann, **2016**, “*The Synergistic Effect of Morphological Modification on β-SnWO<sub>4</sub> Photocatalyst*”, **22<sup>nd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 20-22, Hsinchu, Taiwan.
49. **Y.G. Lin\***, Y.C. Lin, Y.H. Chang, L.C. Hsu, P.Y. Peng, S.Y. Chen, **2016**, “*Study of Hetero-Interfaces for Solar Energy Applications*”, **22<sup>nd</sup> NSRRC Users’ Meeting & Workshops**, Sep. 20-22, Hsinchu, Taiwan.
50. **Y.G. Lin\***, Y.C. Lin, H.J. Lin, Y.H. Chang, **2016**, “*Development of Oxide-based Nanostructures for Solar Hydrogen Applications*”, **Asian Conference on Engineering and Natural Sciences**, Feb. 1-3, Fukuoka, Japan.
51. **Y.G. Lin\***, Y.C. Lin, H.J. Lin, **2015**, “*Study of Novel Nanoarchitectures for Photocatalytic Solar Hydrogen*”, **The annual meeting of chemical society**, Dec. 5-6, Hualien, Taiwan.
52. **Y.G. Lin\***, Y.C. Lin, H.J. Lin, **2015**, “*Development of Novel Nanoarchitectures for Solar Hydrogen Applications*”, **62<sup>nd</sup> Annual Meeting of the Taiwan Institute of Chemical Engineers**, Nov. 5-7, Kaohsiung, Taiwan.
53. **Y.G. Lin\***, Y.C. Lin, H.J. Lin, **2015**, “*Development of Advanced Nanostructures for Photocatalytic Solar*

*Hydrogen Applications*”, **The annual meeting of Taiwan Vacuum Society**, Nov. 5-6, Taipei, Taiwan.

54. Y.C. Lin, H.J. Lin, **Y.G. Lin\***, **2015**, “*Development of Novel Nanoarchitectures for Photocatalytic Solar Hydrogen*”, **21<sup>st</sup> NSRRC Users’ Meeting & Workshops**, Sep. 9-10, Hsinchu, Taiwan.
55. Y.C. Chang, S.N. Hsiao, S.H. Liu, S.K. Chen, **Y.G. Lin\***, H.Y. Lee, C.K. Sung and J.G. Duh, **2015**, “*Low-temperature ordering of L10-FePd epitaxial thin films by introducing Cu underlayer*”, **Taiwan High-Density Plasma Coating Forum**, Feb. 5-6, Taichung, Taiwan.
56. **Y.G. Lin\***, **2015**, “*Study of Advanced Nanostructures for Energy Storage Device*”, **Taiwan High-Density Plasma Coating Forum**, Feb. 5-6, Taichung, Taiwan.
57. Y.J. Li, **Y.G. Lin\*** and Y.K. Hsu, **2014**, “*Homojunction Cu<sub>2</sub>O Thin film for Solar Water Splitting*”, **Optics & Photonics Taiwan, the International Conference (OPTIC)**, Dec. 4-5, Taichung, Taiwan.
58. Y.C. Chang, S.N. Hsiao, S.H. Liu, S.H. Su, S.K. Chen, K.F. Chiu, **Y.G. Lin\***, H.Y. Lee, C.K. Sung and J.G. Duh, **2014**, “*Effect of L12 ordering in antiferromagnetic Ir-Mn epitaxial layer on exchange bias of FePd films*”, **59<sup>th</sup> Annual Conference on Magnetism and Magnetic Materials**, Nov. 3-7, Hawaii, USA.
59. J.R. Wu, Y.K. Hsu and **Y.G. Lin\***, **2014**, “*Fabrication of Homojunction Cu<sub>2</sub>O Solar Cells by Electrochemical Deposition*”, **The 7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia**, Oct. 5-9, Hsinchu, Taiwan.
60. Y.K. Hsu and **Y.G. Lin**, **2014**, “*Spontaneous Formation of CuO Nanosheets on Cu Foil for H<sub>2</sub>O<sub>2</sub> Detection*”, **The 7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia**, Oct. 5-9, Hsinchu, Taiwan.
61. S.H. Liu, C.C. Chen, S.K. Chen, Y.C. Chang, S.N. Hsiao, K.F. Chiu and **Y.G. Lin\***, **2014**, “*Crystallographic structure and magnetic properties of polycrystalline Fe-Pd thin films on glass substrate*”, **The 7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia**, Oct. 5-9, Hsinchu, Taiwan.
62. **Y.G. Lin\***, **2014**, “*Study of Advanced Nanostructures for Energy Storage*”, **The 8<sup>th</sup> Asia-Oceania Forum for Synchrotron Radiation Research**, Sept. 15-18, Hsinchu, Taiwan.
63. **Y.G. Lin\***, **2014**, “*Investigation of Advanced Nanoarchitectures for Energy Storage*”, **20<sup>th</sup> NSRRC Users’ Meeting & Workshops**, Sept. 10-12, Hsinchu, Taiwan.
64. Y.C. Chang, S.N. Hsiao, S.H. Liu, S.K. Chen, J.G. Duh and **Y.G. Lin\***, **2014**, “*Influence of stoichiometry and growth temperature on the crystal structure and magnetic properties of epitaxial L10 Fe-Pd (001) films*”, **20<sup>th</sup> NSRRC Users’ Meeting & Workshops**, Sept. 10-12, Hsinchu, Taiwan.
65. J.R. Wu, Yu-Kuei Hsu, and **Yan-Gu Lin**, **2014**, “*Fabrication of Homojunction Cu<sub>2</sub>O Solar Cells by Electrochemical Deposition*”, **The 3<sup>rd</sup> International Symposium on Next-Generation Electronics (IEEE ISNE)**, May 7-10, Taoyuan, Taiwan.
66. Y.K. Hsu, **Y.G. Lin**, L.C. Chen, and K.H. Chen, **2008**, “*Enhanced stability of Pt nanocatalysts on carbon nanotubes electrode by H<sub>2</sub> plasma treatment for methanol electro-oxidation*” **2<sup>nd</sup> International conference on New Diamond and Nano Carbons**, May 26-29, Taipei, Taiwan.

67. **Y.G. Lin**, Y.K. Hsu, J.L. Yang, C.H. Wang, H.Y. Du, W.C. Wang, J.H. Huang, H.C. Shih, S.Y. Chen, K.H. Chen, and L.C. Chen, **2008**, “*Modification of CNTs for Fuel Cell and Capacitor Application*” **2<sup>nd</sup> International conference on New Diamond and Nano Carbons**, May 26-29, Taipei, Taiwan.
68. C.L. Sun, Y.K. Hsu, C. Bock, **Y.G. Lin**, E.A. Baranova, X.H. Wu, K.H. Chen, L.C. Chen, and B. MacDougall, **2008**, “*PtRuNi Full-Cell Electrocatalysts Supported by N-doped Carbon Nanotubes*” **2<sup>nd</sup> International conference on New Diamond and Nano Carbons**, May 26-29, Taipei, Taiwan.
69. Y.K. Hsu, W.H. Su, **Y.G. Lin**, J.L. Yang, C.L. Sun, S.Y. Chen, C.R. Lin, K.H. Chen, and L.C. Chen, **2006**, “*Ternary PtRuNi Nanocatalysts Dispersed on Multiwall Carbon Nanotubes for Methanol Electro-oxidation in Acid Medium*” **MRS Fall Meeting**, Nov. 27 - Dec. 1, Boston, USA.

### **Conference Organizer/Chair/Synergistic Activities**

1. Session chair at the annual meeting of Materials Research Society of Taiwan, Tainan, Taiwan, 2019.
2. The organizing committee member of the annual meeting of Taiwan Vacuum Society, Hsinchu, Taiwan, 2019.
3. Program Committee of International Workshop on Multidisciplinary Research, Hsinchu, Taiwan, 2019.
4. The international technical committee member of 9<sup>th</sup> International Conference on Applied Physics and Mathematics, Bangkok, Thailand, 2019.
5. The organizing committee member of Global summit on Catalysis Research and Applications, Rome, Italy, 2019.
6. Session chair at the annual meeting of the Physical Society of Republic of China, Hsinchu, Taiwan, 2019.
7. The coordinator of Topical Symposia in the annual meeting of the Physical Society of Republic of China (PSROC), Taiwan (2017-present)
8. The organizing committee member of the annual meeting of Taiwan Vacuum Society, Chiayi County, Taiwan, 2018.
9. Program Committee of International Workshop on Multidisciplinary Research, Chiayi County, Taiwan, 2018.
10. Session chair at Materials Challenge in Alternative and Renewable Energy, Vancouver, Canada, 2018.
11. The technical committee member of 8<sup>th</sup> International Conference on Applied Physics and Mathematics, Phuket Island, Thailand, 2018.
12. Session chair at the annual meeting of the Physical Society of Republic of China, Taipei, Taiwan, 2018.
13. Session chair at IUMRS-ICA Meeting, Taipei, Taiwan, 2017.
14. Director of the Summer School of the Applications on Synchrotron Light Source in National Tsing Hua University (3 credits). (2017-present)

15. The organizing committee member of World Congress on Marine Science, Georgia, USA, 2017.
16. The organizing committee member of the annual meeting of Taiwan Vacuum Society, Tainan, Taiwan, 2017.
17. Session chair at International Workshop on Multidisciplinary Research, Tainan, Taiwan, 2017.
18. Program Committee of International Workshop on Multidisciplinary Research, Tainan, Taiwan, 2017.
19. The technical committee member of 7<sup>th</sup> International Conference on Applied Physics and Mathematics, Tokyo, Japan, 2017.
20. Session chair at the annual meeting of the Physical Society of Republic of China, New Taipei, Taiwan, 2017.
21. Board of Directors of Taiwan Vacuum Society (2016-2020)
22. Chairperson of Student Poster/Oral Contest Presentation (Materials Science) in NSRRC Users' Meeting & Workshops (2015-2018)
23. The local organizing committee member of the annual meeting of Taiwan Vacuum Society, Taipei, Taiwan, 2015.
24. Session chair at NSRRC Users' Meeting & Workshops, Hsinchu, Taiwan. (2015-迄今)
25. Editorial Committee of NSRRC Activity Report (2014-迄今)
26. Symposium Co-organizer at 7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia, Hsinchu, Taiwan, 2014.
27. Session chair at 7<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia, Hsinchu, Taiwan, 2014.