



半導體材料與製程學士學位學程

Bachelor Program in Semiconductor Materials and Fabrication

一、師資

職稱	姓名	學歷	專長
副教授 兼學程主任 (112.02 轉入至半導體學程)	吳永富	國立台灣大學 化學工程博士	光電顯示器材料與製程、半導體材料與製程、電化學工程
助理教授	陳正龍	國立清華大學 材料科學工程博士	化合物半導體製程技術、半導體材料之熱傳與電性傳輸、半導體晶體成長與分析檢測、半導體、金屬與陶瓷膜成長與微奈米製程、材料與元件之電性測量與分析
助理教授 (112.08 到職)	張峻瑜	國立台灣大學 材料工程博士	高分子材料設計與合成、光電高分子及有機光伏元件、奈米複合材料、同步輻射小角度 x-ray 散射技術

二、期刊論文

- [1] Subbiramaniyan Kubendhiran, Ren-Jei Chung, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, "Enhanced photoelectrochemical water oxidation on BiVO₄ by addition of ZnCo-MOFs as effective hole transfer co-catalyst", INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, 48,(1), pp.101, pp.112, 2023. 【SCIE & EI】
- [2] Tsung-Rong Kuo, Istikhori Fitriannisa, Ren-Jei Chung, Kuan-Hsien Lin, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, "Facile synthesis of copper cobalt sulfide and nickel hydroxide tube-like composites as battery-type active material of energy storage devices", JOURNAL OF ENERGY STORAGE, 65, pp.107330-1, pp.107330-9, 2023. 【SCIE & EI】
- [3] Tsai-Mu Cheng, Hao Pai, Chia-Shuo Hsu, Subbiramaniyan Kubendhiran, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, "Incorporation of oxidized zeolitic imidazolate framework 67 as effective Co-catalyst on W-doped BiVO₄ for catalyzing photoelectrochemical water oxidation", INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, 48,(13), pp.5152, pp.5165, 2023. 【SCIE & EI】
- [4] Yu-Cheng Hsiao, Chen-Hao Liao, Chia-Shuo Hsu, Sibidou Yougbar, Lu-Yin Lin, Yung-Fu Wu, "Novel synthesis of manganese cobalt layered double hydroxide and sulfur-doped nickel cobalt layered double hydroxide composite as efficient active material of battery supercapacitor hybrids",

- JOURNAL OF ENERGY STORAGE, 57, pp.106171-1, pp.106171-11, 2023. 【SCIE & EI】
- [5] Tsai-Mu Cheng, Shih-Chia Yen, Chia-Shuo Hsu, Wei-Teng Wang, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, “Novel synthesis of polyaniline, manganese oxide and nickel sulfide lavender-like composites as efficient active material of supercapacitor”, JOURNAL OF ENERGY STORAGE, 66, pp.107390-1, pp.107390-12, 2023. 【SCIE & EI】
- [6] Tsung-Rong Kuo, Kuan-Hsien Lin, Mei-Wei Chen, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, “Tailing copper cobalt sulfide particle-decorated tube-like structure as efficient active material of battery supercapacitor hybrid”, JOURNAL OF ENERGY STORAGE, 67, pp.107564-1, pp.107564-8, 2023. 【SCIE & EI】
- [7] Tsai-Mu Cheng, Chi-Hong Hsieh, Li-Dan Shang, Yu-Min Fan, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, “Effects of metal ratios and post treatments on energy storage ability of cobalt manganese metal organic frameworks”, JOURNAL OF ENERGY STORAGE, 68, pp.107730-1, pp.107730-9, 2023. 【SCIE & EI】
- [8] Tsai-Mu Cheng, Su-Ching Wang, Pin-Yan Lee, Chia-Shuo Hsu, Mei-Wei Chen, Sibidou Yougbare, Hsiao-Chien Chen, Chutima Kongvarhodom, Lu-Yin Lin, Yung-Fu Wu, “Novel insights of structure evolution between ZIF and hydroxide via controlled doses of ammonium bifluoride and applications on battery supercapacitor hybrids”, JOURNAL OF ENERGY STORAGE, 68, pp.107709-1, pp.107709-9, 2023. 【SCIE & EI】
- [9] Tsung-Rong Kuo, Hanny Tika Draviana, Chia-Shuo Hsu, Ren-Jei Chung, Min-Wen Chen, Su-Ching Wang, Pin-Yan Lee, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, “Novel synthesis of ZIF67 derived cobalt and nickel oxides induced by ammonium tetrafluoroborate as electroactive material of battery supercapacitor hybrids”, JOURNAL OF ENERGY STORAGE, 68, pp.107831-1, pp.107831-11, 2023. 【SCIE & EI】
- [10] Kubendhiran Subbiramaniyan, Ren-Jei Chung, Bo-Jin Pan, Sibidou Yougbare, Yung-Fu Wu, Lu-Yin Lin, “Constructing metal organic framework derived manganese cobalt layered double hydroxide nanosheets on Ni foam as cost-effective binder-free electrodes of high-performance supercapacitors”, MATERIALS TODAY CHEMISTRY, 33, pp.101719-1, pp.101719-12, 2023. 【SCIE & EI】
- [11] Tsai-Mu Cheng, Pin-Chun Lee, Mei-Wei Chen, Hung-Ming Chen, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, “Active sites-induced decoration of nickel hydroxide nanosheets on copper oxide nanocubes as electroactive material of battery supercapacitor hybrids”, JOURNAL OF ENERGY STORAGE, 72, pp.108143-1, pp.108143-10, 2023. 【SCIE & EI】
- [12] Tsai-Mu Cheng, Kai-Jie Chuang, Hsiao-Wen Huang, Hung-Ming Chen, Yu-Min Fan, Sibidou Yougbare, Lu-Yin Lin, Yung-Fu Wu, “Enhancements on oxygen vacancy and light absorption of alkaline-etched BiVO₄ for photoelectrochemical water oxidation”, INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, 48,(91), pp.35561, pp.35571, 2023. 【SCIE & EI】
- [13] Chuan-Chih Hsu, Subbiramaniyan Kubendhiran, Jhih-Hong Lai, Muhammad Saukani, Sibidou Yougbare, Hung-Ming Chen, Yu-Cheng Hsiao, Yung-Fu Wu, Lu-Yin Lin, “Facilitating light utilization and electron transfer of TiO₂ nanotube arrays for catalyzing photoelectrochemical water reduction via acid etching and copper doping”, MATERIALS TODAY CHEMISTRY, 34,

pp.101815-1, pp.101815-9, 2023. 【SCIE & EI 】

三、研討會論文

- [1] Chia-Hsien Lee, Meng-Fang Lin, Yu-Ching Huang, Chun-Yu Chang, “Controlling the molecular weight of PBG to prepare uniform bio-scaffolds for cell growth”, International Conference on Smart Devices and Sustainable Energy (SDSE 2023), 新北市, 中華民國, 2023/11/7. 【國際學術研討會】
- [2] Yo-Yuan Gu, Chun-Yu Chang, Kai-Chi Hsiao, Chia-Hsien Lee, Ming-Chung Wu, Meng-Fang Lin, Yu-Ching Huang and Wei-Fang Su, “Investigate the long term storage and drug release characteristics of polypeptide based fiber scaffolds”, International Conference on Smart Devices and Sustainable Energy (SDSE 2023), 新北市, 中華民國, 2023/11/7. 【國際學術研討會】
- [3] Yu-Ting Lin, Yo-Yuan Gu, Yu-Ching Huang, Yu-Sheng Hsiao, Meng-Fang Lin, Wei-Fang Su, Chun-Yu Chang, “Molecular effect on the polyglutamate and polylysine copolymer electrospinning film”, International Conference on Smart Devices and Sustainable Energy (SDSE 2023), 新北市, 中華民國, 2023/11/7. 【國際學術研討會】
- [4] Priyanka Chaudhary, Dun-Heng Tan, Meng Feng Lin, Yu-Ching Huang, Chun-Yu Chang and Wei-Fang Su, “Study of mechanical properties of cellulose-nanofibers/ polypeptide composite (CNF/PLL80GA20) hydrogels”, International Conference on Smart Devices and Sustainable Energy (SDSE 2023), 新北市, 中華民國, 2023/11/7. 【國際學術研討會】
- [5] Chun-Yu Chang, An-Jey Su, Kai-Chi Hsiao, Chia-Hsien Lee, Yu-Ting Lin, Ming-Chung Wu, Meng-Fang Lin, Yu-Ching Huang, Kia Washington and Wei-Fang Su, “Exploring storage stability and drug release behavior of polypeptide based fibrous scaffold for tissue engineering”, 2023 Materials Research Society-Taiwan International Conference (2023 MRSTIC), 新竹市, 中華民國, 2023/11/17. 【國際學術研討會】
- [6] Chia-Hsien Lee, Meng-Fang Lin, Yu-Ching Huang and Chun-Yu Chang, “Prepare poly (γ -benzyl-L-glutamate) nanofiber scaffolds by using an electrospinning solution with optimized solvent ratio”, 2023 TwICH E 台灣化學工程學會70週年年會暨國科會化學工程學門成果發表會/國際分子與生醫工程研討會, 台北市, 中華民國, 2023/12/9. 【國內學術研討會】
- [7] Yu-Ting Lin, Yo-Yuan Gu, Yu-Ching Huang, Yu-Sheng Hsiao, Meng-Fang Lin, Wei-Fang Su and Chun-Yu Chang, “Investigate the composition of polylysine and polyglutamate copolymer for bioscaffolds application”, 2023 TwICH E 台灣化學工程學會70週年年會暨國科會化學工程學門成果發表會/國際分子與生醫工程研討會, 台北市, 中華民國, 2023/12/9. 【國內學術研討會】
- [8] Yo-Yuan Gu, Yu-Ting Lin, Meng-Fang Lin, Yu-Ching Huang, Wei-Fang Su and Chun-Yu Chang, “開環陰離子聚合量產聚谷氨酸苄酯以應用於生醫工程”, 2023 TwICH E 台灣化學工程學會70週年年會暨國科會化學工程學門成果發表會/國際分子與生醫工程研討會, 台北市, 中華民國, 2023/12/9. 【國內學術研討會】
- [9] Priyanka Chaudhary, Dun-Heng Tan, Meng Feng Lin, Yu-Ching Huang, Chun-Yu Chang and Wei-Fang Su, “Preparation of cellulose-nanofiber/ polypeptide composite hydrogel: synthesis, fabrication, and characterization.”, 2023 TwICH E 台灣化學工程學會70週年年會暨國科會化學工程學門成果發表會/國際分子與生醫工程研討會, 台北市, 中華民國, 2023/12/9. 【國內學術研討會】

研討會】

四、研究及產學合作計畫

單位:元

項次	主持人	計畫名稱	委託 單位	起訖日期	總計	政府	企業	本校
1	陳正龍	層狀半導體材料的熱電性質探索與能源應用(1/3)	國科會	112/01/01 112/12/31	1,922,000	1,922,000	0	0
合計					1,922,000	1,922,000	0	0