**Curriculum Vitae**

Yu-Lun Chueh ​

Department of Materials Science and Engineering

National Tsing-Hua University, Taiwan

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Lab Website: http://nanoscienceandnanodevicelab.weebly.com/index.html

**Researcher ID number**

Google scholar: [​http://scholar.google.com.tw/citations?user=PYHVJ3UAAAAJ&hl=zh-TW](http://scholar.google.com.tw/citations?user=PYHVJ3UAAAAJ&hl=zh-TW) (>**13000** citations and **54** of H factor)

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Web of Science Researcher ID: E-2053-2013

**Education**

Ph.D., National Tsing Hua University, Taiwan, 2006

B.S., National Sun Yat-sen University, Taiwan, 1999

**Academic Experiences**

Professor in the Department of Materials Science and Engineering, National Tsing-Hua University, 2015/Aug ~ present

Adjunct Professor Department of Physics, National Sun Yat-Sen University, Kaohsiung, 80424, Taiwan, ROC. 2016/Dec~ Present

Associate Professor in the Department of Materials science and Engineering, National Tsing-Hua University, 2012/Aug ~ 2015/Aug

Assistant Professor in the Department of Materials science and Engineering, National Tsing-Hua University, 2009/Aug ~ 2012/Aug

Postdoctoral Fellow in Laboratory for Nanomaterials &Electronics, Department of

Electrical Engineering and Computer Sciences, University of California at Berkeley, USA, 2008/Apr- 2009/July(Prof. Ali Javey's Research Group).

Postdoctoral Fellow in Nano-structures & dynamics Lab Department of Materials Science and Engineering National Tsing -Hua University, Hsinchu, Taiwan. 2007/Nov- 2008/Apr.

**Reseach Interests**

Prof. Yu-Lun Chueh’s lab is highly interdisciplinary and is committed to exploring new unpredicted levels of functional materials to enable new schemes on manipulating and processing of engineering nanomaterials in nanoelectronics and energy harvesting applications. Some representatives of my excellent scientific achievements toward*“New Materials Technologies”* The current research directions include:

(1)Development of Cu(In,Ga)Se2 solar cell and its investigation on light-harvesting behaviors.

(2)Growth of low dimensional materials and its possible functional applications

(3)Low power resistive random access memory

(4)Development of various method to synthesize different Graphene/two dimensional

Materials

**International and Domestic Awards and Honors**

-2012 Pan Wen Yuan Exchange Scholar Program Award, Taiwan

-2012 Outstanding Young National Tsing Hua University Professor Award

-2013 Ta-You Wu Award (The most significant research award for young faculty below 42 in

Taiwan)

-2013 Taiwan Vacuum Society Young Researcher Award, Taiwan

-2013 The Electronics Devices and Materials Association-Outstanding Achievement-

Outstanding Young Researcher Award, Taiwan

-2015 Lam Research Foundation University Funding Award, USA

-2015 Excellent Young Researcher Award Project from the Ministry of Science and

Technology, Taiwan

-2015 Chinese Material Engineering Society Young Researcher Award, Taiwan

-2016 Excellent Young Researcher Award Project from the Ministry of Science and

Technology, Taiwan

-2017 APEC Science Prize for Innovation, Research and Education, Taiwan

-2017 ​Associate Academician, Asia Pacific Academy of Materials

-2018 ​Fellow of the Royal Society of Chemistry

-2019 MOST Research Award (The most significant research award in Taiwan)

**Awards and Honors by Team Members**

-Outstanding Master Thesis Awardof The Physical Society of the Republic of China, 2012, Master student, Chi-Hsin Huang

-Outstanding post-award in nanoscience session, Annual meeting of the physical society of Republic of China, 2012, PhD student, Yi-Chung Wang.

-Excellent post award in nanoscience session, Annual meeting of the physical society of Republic of China, 2012, PhD student, Szu-Ying Chen

-Excellent post award in nanoscience session, Annual meeting of the physical society of Republic of China, 2012, PhD student, Wen-Chun Yen.

-Outstanding post award in semiconductor session, Annual meeting of the physical society of Republic of China, 2012, PhD student, Shih-Ming Lin

-Excellent post award in semiconductor session, Annual meeting of the physical society of Republic of China, 2013, PhD student, Hsin-Wei Huang

-Excellent post award in nanoscience session, Annual meeting of the physical society of Republic of China, 2013, PhD student, Yu-Ze Chen

-Excellent post award in nanoscience session, Annual meeting of the physical society of Republic of China, 2013, PhD student, Wen-Chun Yen.

-Excellent post award in Annual meeting of material engineering society of Republic of China, 2013, PhD student, Wen-Chun Yen.

-Excellent post award in Annual meeting of material engineering society of Republic of China, 2013, PhD student, Yu-Ze Chen.

-Outstanding post award in nanoscience session, Annual meeting of the physical society of Republic of China, 2014, PhD student, Yu-Chuan Shih

-2nd award, Chinese College Students’ Innovational Design Competition of Advanced Materials, 2014, PhD student, Yi-Chung Wang

-Outstanding post award, 2014 7th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-7), PhD student, Yu-Ze Chen

-Outstanding post award in nanoscience session, Annual meeting of the physical society of Republic of China, 2015, PhD student, Yu-Chuan Shih

-230th Meeting of The Electrochemical Society, Howaii Convention Center, Honolulu, Hi, Oct, 2-7, 2016, Arumugam Manikandan, Best student award.

-Excellent post award in Annual meeting of material engineering society of Republic of China, 2016, Master Student, Hsuan-Chu Chen.

-Excellent paper award in IUMRS-ICA meeting, 2017-postdoc Dr. Henry Medina.

-Excellent paper ward in 2017 IUMRS-ICA meeting, Master studnet-Hsiao-Chien Wang

**-**Excellent post award in Annual meeting of material engineering society of Republic of China, 2018, Master student, Ching-Chen Chang.

**-**Excellent post award in Annual meeting of material engineering society of Republic of China, 2018, Master student, Cheng-Che Pan

-Outstanding post-award in nanoscience session, Annual meeting of the physical society of Republic of China, 2019, PhD student, Shin-Yi Tang

-Outstanding post-award in nanoscience session, Annual meeting of the physical society of Republic of China, 2019, Master student, Yen-Kai Cheng

**Symposium Organizer/Program committee**

-2011 IUMRS-ICA, Taiwan Symposium V.E1. Oxide /nitride for electronic applications, symposium organizer.

-2012 222th ECS Meeting, Honolulu, Hawaii, Oct. 7-12, 2012. E6, symposium organizer.

-2013 224 ECS meeting, San Francisco, CA, Oct. 27-Nov. 1, 2013, Hilton San Francisco, E11 symposium organizer.

-2104 226 ECS meeting, Cancun, Mexico, Oct 05-09, 2014, Lead organizer of Q4-Low dimensional nanoscale Electronic and Photonic electrons.

-2014 EMN EAST MEETING Energy Materials Nanotechnology, Chengdu, China, Sep 22-25, 2014. International grogram committee.

-2014 Second International of Young Researches on Advanced Materials (IUMRS-ICYRAM2014), 2014, OCT 24-29, International grogram committee.

-2015 15th International Meeting on Information Display (IMID 2015), Program Co-Committee Member, EXCO, Daegu, Korea, August 18 to 21, 2015.

-2015 the 228the ECS Meeting, October 11-16 — Phoenix, AZ, Hyatt Regency Phoenix & Phoenix Convention Center. Ho1 symposium organizer.

-2015 3rd International Conference on Advanced Electromaterials (ICAE)", Jeju Korea, November 17-20, 2015, co-organizer in the session of "Nanostructured materials for energy devices"

-2016 the 16th International Meeting on Information Display, Aug, 23-26, 2016, ICC Jeju, Jeju, Korea, symposium organizer

-2016 230th Meeting of The Electrochemical Society, Hawaii Convention Center, Honolulu, Hi, Oct, 2-7, 2016 (PRIME, PACIFIC RIM MEETING on electrochemical and solid-state science), Ho4 symposium organizer

-2016 IUMRS-ICA 2016, The 17th International Conference in in Asia, Oingdao International Convention Center, Oct, 20-24, 2016, L symposium organizer.

-2017 EMN Open Access Week 2017, Energy Material Nanotechnology & Fundamental and Frontier Science Forum, May 8-12, 2017, Chengdu, China. symposium organizer

-2017 231st ECS Meeting May 28-June 1, 2017 — New Orleans, LA, Hilton New Orleans Riverside. symposium organizer

-2017 9th International Conference on Materials for Advanced Technologies (ICMAT), 18-23 June, 2017, Suntec, Singapore. symposium organizer.

-2017 232nd ECS meeting, Oct. 1-5, 2017, Gaylord National Resort and Convention Center. symposium organizer

-2017 4th International Conference on Advanced Electromaterials (ICAE 2017), 21-24 November 2017, Jeju, Korea. (Invited Speaker)

-2018 234th ECS meeting The Electrochemical Society/AiMES, Cancun, Mexico.

-2019 236th ECS Meeting October 13-17, 2019, Atlanta, GA

**Volunteer/Professional Society Activities**

**Editor in Chief**

Nanoscale research letter, Impact Factor: 3.15 (2012-Now)

**Editor/ Senior Editor/Associate Editor**

Nanoscience and Nanotechnology Letter, Impact Factor: 2.9 (2012-Now)

Journal of Nanomaterials, Impact Factor: 2.9 (2013-Now)

Journal of Nanoscience Letters (2016-Now)

**Editorial board members**

Scientific Reports, Impact Factor:4.2 (2014-Now)

Hydrogen, (2019-Now)

**Guest Editor**

Journal of Nanomaterials, (2012)

Materials Today Energy, (2019)

**Activity in the Professional Society**

Fellow of the Royal Society of Chemistry

​Fellow of the Institute of Materials, Minerals and Mining (IOM3)

Associate Academician and Member of Asia Pacific Academy of Materials

Senior Member of IEEE

Member of American Chemistry Society

Member of the Optical Society

Member of SPIE

Member of Materials Research Society

Executive Director of Electronics and Photonics Division, the electrochemical society (2010-Now)

Executive Director of Taiwan Vacuum Society (2016-Now)

Executive Director of Taiwan Microscopy Society (2019-Now)

**Published Papers Selected as The Cover Image:**

-2014- Nanoscale, Vol. 6- Inside back cover

-2014**-Journal of Materials Chemistry C,** Vol.2- Inside front cover

-2014- Nanoscale, Vol. 6- Front cover

-2014- CrystEngComm, Vol. 16- Front cover

-2015- Nano Energy, Vol. 15- Front cover

-2016- Advanced Materials, Vol. 28- Front cover

-2017- Journal of Materials Chemistry A, Vol. 5- Front cover

-2018- Advanced Energy Materials, Vol. 8- Inside front cover

-2019-Small, 5,1803529-Front cover

-2019-Small, 15, 1900578-Front cover

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**Publication list after joining NTHU from 2009-2020**

**\*corresponding author:**

**2020**

1. Guojing Hu, Yuanmin Zhu, Junxiang Xiang, Tzu-Yi Yang*,* Meng Huang, Zhe Wang, Zhi Wang, Ping Liu, Ying Zhang, Chao Feng, Dazhi Hou, Wenguang Zhu, Meng Gu, Yalin Lu, Chia-Hsiu Hsu, Feng-Chuan Chuang, Bin Xiang\* and **Yu-Lun Chueh\***, “Antisymmetric Magnetoresistance in a Van der Waals Antiferromagnetic/Ferromagnetic layered MnPS3/Fe3GeTe2 Stacking Heterostructure”, ***ACS NANO***, 2020, ASAP, DOI: 10.1021/acsnano.0c05252.
2. Yu-Shan Zhang, Bin-Mei Zhang, Yu-Xia Hu, Jun Li, Chun Lu, Ming-Jin Liu, Kuangye Wang, Ling-Bin Kong, Chen-Zi Zhao**,** Wen-Jun Niu, Wen-Wu Liu, Kun Zhao, Mao-Cheng Liu\* and **Yu-Lun Chueh\*** “Diamine Molecules Double Lock-Link Structured Graphene Oxide Sheets for High-Performance Sodium Ions Storage”, ***Energy Storage Materials***, 2020, In press, https://doi.org/10.1016/j.ensm.2020.08.021
3. Shin-Yi Tang, Chun-Chuan Yang, Teng-Yu Su, Tzu-Yi Yang, Shu-Chi Wu, Yu-Chieh Hsua, Yu-Ze Chen, Tzu-Neng Lin, Ji-Lin Shen, Heh-Nan Lin, Po-Wen Chiu, Hao-Chung Kuo, **Yu-Lun Chueh\***, “Design of Core-Shell Quantum Dots-3D WS2 Nanowalls Hybrid Nanostructures with High-Performance Bifunctional Sensing Applications, ***ACS NANO 2020,*** DOI:10.1021/acsnano.0c01264.
4. Yu-Chuan Shih, Ling Lee, Kai-De Liang, Arumugam Manikandan, Wen-Wu Liu, Yu-Ze Chen, Mu-Tung Chang, Zhiming M. Wang, and **Yu-Lun Chueh\*** “Smart Design of Resistive Switching Memory by an *In-Situ* Current-Induced Oxidization Process on a Single Crystalline Metallic Nanowire**”, *Advanced Electronic Materials, 2020, In press*** aelm.202000252R1
5. Wen-Jun Niu, Jin-Zhong He, Ya-Ping Wang, Qiao-Qiao Sun, Wen-Wu Liu, Lu-Yin Zhang, Mao-Cheng Liu, Ming-Jin Liu, **Yu-Lun Chueh\***, “Hybrid Transition Metal Nanocrystals-Embedded Graphitic Carbon Nitride Nanosheets System as Superior Oxygen Electrocatalyst for Rechargeable Zn-Air Batteries”, ***Nanoscale***, 2020, **https://doi.org/10.1039/D0NR03987J**
6. Dhayanantha Prabu Jaihindh, [Arumugam Manikandan](https://chemistry-europe.onlinelibrary.wiley.com/action/doSearch?ContribAuthorStored=Manikandan%2C+Arumugam), [Yu‐Lun Chueh](https://chemistry-europe.onlinelibrary.wiley.com/action/doSearch?ContribAuthorStored=Chueh%2C+Yu-Lun) and Yen‐Pei Fu, “Deep Eutectic Solvent‐Assisted Synthesis of Ternary Heterojunctions for the Oxygen Evolution Reaction and Photocatalysis”, ChemSusChem, 2020, In press, 2020, 2726-2738.
7. Jin-Zhong He, Wen-Jun Niu, Ya-Ping Wang, Qiao-Qiao Sun, Ming-Jin Liu, Kuangye Wang, Wen-Wu Liu, Mao-Cheng Liu, Fu-Cheng Yu, **Yu-Lun Chueh\***, “In-Situ Synthesis of Hybrid Nickel Cobalt Sulfide/Carbon Nitrogen Nanosheet Composites as Highly Efficient Bifunctional Oxygen Electrocatalyst for High-Performance Rechargeable Zn-Air Batteries”***, Electrochimica Acta,*** DOI: 10.1016/j.electacta.2020.136968
8. Yi-Chung Wang, Chia-Wei Chen, Teng‐Yu Su, Tzu-Yi Yang, Wen-Wu Liu, Faliang Cheng\*, Zhiming M.Wang\*, and **Yu-Lun Chueh\***, “Design of Suppressing Optical and Recombination Losses in Ultrathin CuInGaSe2 Solar Cells by Voronoi Nanocavity Arrays”, ***Nano Energy***, 14 August 2020, 105225
9. Yu-Ming Huang, Shun-Chieh Hsu, Ning Li , Chung-Ping Yu, Li-Ann Ke ,Chung-Ping Huang, Shu-Hsiu Chang, **Yu-Lun Chueh**, Hao-Chung Kuo and Chien-Chung Lin\* “The Photothermal Stability Study of Quantum Dots Embedded in Sodium Chlorides” ***Crystals***, 2020, 10, 2; doi:10.3390/cryst10010002
10. Yaoguang Wang,‡a Yingming Zhu,‡b Hao Zhang,a Chao Yang,a Kuangye Wang, **Yu-Lun Chueh\*** and Wei Jiang\* ,“Hierarchical Bi-doped BiOBr microspheres assembled from nanosheets with (0 0 1) facet exposed via crystal facet engineering toward highly efficient visible light photocatalysis” , ***Applied Surface Scienc***e, 22020, 145927
11. Yuanfei Ai, Shu-Chi Wu, Kuangye Wang, Tzu-Yi Yang, Mingjin Liu, Hsiang-Ju Liao, Jiachen Sun, Jyun-Hong Chen, Shin-Yi Tang, Ding Chou Wu, Teng-Yu Su, Yi-Chung Wang, Hsuan-Chu Chen, Shan Zhang, Wen-Wu Liu, Yu-Ze Chen, Ling Lee, Jr-Hau He, Zhiming M. Wang and **Yu-Lun Chueh\***, “Three-Dimensional Molybdenum Diselenide Helical Nanorod Arrays for High-Performance Aluminum-Ion Batteries**” *ACS NANO*, 2020,** 14, 7, 8539–8550
12. Shu-Chi Wu, Yuanfei Ai, Yu-Ze Chen, Kuangye Wang, Tzu-Yi Yang, Hsiang-Ju Liao, Teng-Yu Su, Shin-Yi Tang, Chia-Wei Chen, Ding Chou Wu, Yi-Chung Wang, Arumugam Manikandan, Yu-Chuan Shih, Ling Lee and **Yu-Lun Chueh\***, “High-Performance Rechargeable Aluminum-Selenium Battery with A New Deep Eutectic Solvent Electrolyte: Thiourea-AlCl3” **ACS Appl. Mater. Interfaces, 2020**, 12, 24, 27064–27073.
13. Ling Lee, Shin-Yi Tang, Jung-Hung Chen, Teng-Yu Su, Hsuan-Chu Chen, Chia-Hsien Lin, Ching-Yu Chiang, Shang-Jui Chiu, Ching-Shun Ku, Ji-Lin Shen, Zhiming M. Wangand Yu-Lun Chueh\*, “Nanoprobing of MoS2 by synchrotron radiation when van der Waals epitaxy is locally invalid” **ACS Appl. Mater. Interfaces, 2020**, 12, 28, 32041–32053
14. Van-Qui Le, Phuoc-Anh Le, Shu-Chi Wu, Yu-Hong Lai, Yan-Gu Lin, Kung-Hwa Wei, Ying-Hao Chu and **Yu-Lun Chueh\***, “Transparent Flexible Heteroepitaxy of NiO coated AZO Nanorods Arrays on Muscovites for Enhanced Energy Storage Application”, **Small, 2020,** 2000020
15. Wen-Wu Liu, Wei Jiang, Yu-Cheng Liu, Wen-Jun Niu, Mao-Cheng Liu, Ling-Bin Kong, Ling Lee, Zhiming M. Wang, **Yu-Lun Chueh\***, “Interface Engineered Binary Platinum Free Alloy-based Counter Electrodes with Improved Performance in Dye-Sensitized Solar Cells”, **Scientific Reports, 10**, 9157**, 2020.**
16. ​Jijun Zhang, Yan Wang, Hsiang-Ju Liao, Tzu-Yi Yang, Zexiang Chen, Xinyu Yan, Zhiyu Zhou, Huifang lv, Wen-Wu Liu, **Yu-Lun Chueh\***, “Hierarchical Mn-doped Fe2O3@rGO Hollow Core-Shell Spheres for High-Performance Hybrid Capacitor”, **Materials Today Energy, 2020,** 17, 100388, **,**
17. Teng-Yu Su, Yu-Ze Chen, Yi-Chung Wang, Shin-Yi Tang, Yu-Chuan Shih, Faliang Cheng, Zhiming Wang, Heh-Nan Lin, **Yu-Lun Chueh\***, “Highly Sensitive, Selective and Stable NO2 Gas Sensors with PPb-Level Detection Limit on 2D-Platinum Diselenide Films”, **Journal of Materials Chemistry C,**, **2020, 8**, 4851-4858.
18. Dhayanantha Prabu Jaihindh, Arumugam Manikandan, **Yu-Lun Chueh**, Yen-Pei Fu, “Deep Eutectic Solvents Assisted Synthesis of Ternary Heterojunction Composites for Oxygen Evolution Reaction and Photocatalytic Activity”, **Chem. Sus. Chem., 2020**, 22, 2726-2738,
19. Wenwu Liu, Wei Jiang, Yu-Cheng Liu, Wenjun Niu, MaoCheng Liu, Kun Zhao, Lu-Yin Zhang, Ling Ling-Bin Kong, **Yu-Lun Chueh\***, “Platinum-Free Ternary Metallic Selenides as Nanostructured Counter Electrode for High-Efficiency Dye-Sensitized Solar Cell by Interface Engineering”, **ACS Applied Energy Materials,** 3, 4, 3704–3713 **2020**.
20. Yaoguang Wang, Jian He, Yingming Zhu, Hao Zhang, Chao Yang, Kuangye Wang, Shu-chi Wu, Wei Jiang, **Yu-Lun Chueh\***, “Hierarchical Bi-doped BiOBr microspheres assembled from nanosheets with (0 0 1) facet exposed via crystal facet engineering toward highly efficient visible light photocatalysis”, **Applied Surface Science, 2020**, 145927.
21. Manisha Kondiba Date, Li-Heng Yang, Tzu-Yi Yang, Kuang-ye Wang, Teng-Yu Su, Ding-Chou Wu, **Yu-Lun Cheuh\***,  “Three Dimensional CuO/TiO2 Hybrid Nanorod Arrays Prepared by Electrodeposition in AAO Membranes as an Excellent Fenton-like Photocatalyst for Dye Degradation”, **Nanoscale Research Letters, 2020**, 15, 45.
22. Pavithra Sriram, Yu-Po Wen, Arumugam Manikandan, Kun-Chieh Hsu, Shin-Yi Tang, Bo-Wei Hsu, Yu-Ze Chen, Hao-Wu Lin, Horng-Tay Jeng, **Yu-Lun Chueh**, Ta-Jen Yen, “Enhancing Quantum Yield in Strained MoS2 Bilayers by Morphology-Controlled Plasmonic Nanostructures toward Superior Photodetectors”, **Chemistry of Materials, 2020,** 32, 6, 2242-2252.
23. Mark Hettick, Hao Li, Der-Hsien Lien, Matthew Yeh, Tzu-Yi Yang, Matin Amani, Niharika Gupta, Daryl C Chrzan, **Yu-Lun Chueh**, Ali Javey, “Shape-controlled single-crystal growth of InP at low temperatures down to 220 °C", **Proceedings of the National Academy of Sciences, 2020,** 14, 117 (2), 902-906.
24. Yu-Ming Huang, Shun-Chieh Hsu, Ning Li, Chung-Ping Yu, Li-Ann Ke, Chung-Ping Huang, Shu-Hsiu Chang, **Yu-Lun Chueh,** Hao-Chung Kuo, Chien-Chung Lin, “The Photothermal Stability Study of Quantum Dots Embedded in Sodium Chlorides”, **Crystals, 2020,** 10, 2.
25. ​Pavithra Sriram, Arumugam Manikandan, Feng-Chuan Chuang, **Yu-Lun Chueh\***, “Hybridizing Plasmonic Materials with 2D-Transition Metal Dichalcogenides Toward Functional Applications”, Invited review paper, **Small, 2020,** 1904271.

**2019**

1. Jun Li, Qing-Qing Yang, Yu-Xia Hu, Mao-Cheng Liu, Chun Lu, Hui Zhang, Ling-Bin Kong, Wen-Wu Liu, Wen-Jun Niu, Kun Zhao, Yi-Chung Wang, Faliang Cheng, Zhiming M. Wang, and **Yu-Lun Chueh\***, “Design of Lamellar Mo2C Nanosheets Assembled by Mo2C Nanoparticles as an Anode Material toward Excellent Sodium-Ion Capacitors”, **ACS Sustainable Chem. Eng., 2019,** 7, 22, 18375-18383.
2. Mao-Cheng Liu, Chun Lu, Yan Xu, Yu-Xia Hu, Jun Li, Hui Zhang, Yu-Shan Zhang, Bing-Mei Zhang, Ling-Bin Kong, Wen-Wu Liu, Wen-Jun Niu, Kun Zhao, Ling Lee, Zhiming M. Wang and **Yu-Lun Chueh\***, “Three-Dimensional Interconnected Reticular Porous Carbon From Corn Starch By a Sample Sol−Gel Method Toward High-Performance Supercapacitors With Aqueous and Ionic Liquid Electrolytes”, **ACS Sustainable Chem. Eng., 2019,** 7, 22, 18690-18699.
3. Yan Wang, Hualiang Wei, Huifang Lv, Zexiang Chen, Jijun Zhang, Xinyu Yan, Ling Lee, Zhiming M. Wang, and **Yu-Lun Chueh\*,** “Highly stable three-dimensional nickel–cobalt hydroxide hierarchical heterostructures hybridized with carbon nanotubes for high performance energy storage devices”, ***ACS Nano*, 2019**, 13, 10, 11235-11248.
4. Yu-Ze Chen, Shao-Hsin Lee, Teng-Yu Su, Shu-Chi Wu, Pin-Jung Chen and **Yu-Lun Chueh\*, “**Plasma-Engineered 1T/2H Phases in 3D-Hierarchical WSe2 Nanoscrews as High Performance NO Gas Sensors with ppb-level Detection Limit” ***Journal of Materials Chemistry A***, **2019**, 7, 22314-22322.
5. Chia-Wei Chen, Hung-Wei Tsai, Yi-Chung Wang, Yu-Chuan Shih, Teng-Yu Su, Chen-Hua Yang, Wei-Sheng Lin, Chang-Hong Shen, Jia-Min Shieh and **Yu-Lun Chueh**\*, “Rear-Passivated Ultrathin Cu(In,Ga)Se2 Films by Al2O3 Nanostructures Using Glancing Angle Deposition Toward Photovoltaic Devices with Enhanced Efficiency”, ***Advanced Functional Materials*, 2019,** 1905040.
6. ​Yi-Chung Wang, Tsung-Ta Wu, and **Yu-Lun Chueh\***, “A Critical Review on Flexible Cu (In, Ga) Se2 (CIGS) Solar Cells”, ***Materials Chemistry and Physics*, 2019,** 234, 329-344.
7. ​Wen-Jun Niu, Ya-Ping Wang, Jin-Zhong He, Wen-Wu Liu, Mao-Cheng Liu, Dan Shan, Ling Lee and **Yu-Lun Chueh\***, “Highly Stable Nitrogen-Doped Carbon Nanotubes Derived from Carbon Dots and Metal-Organic Frameworks Toward Excellent Efﬁcient Electrocatalyst for Oxygen Reduction Reaction”, **Nano Energy, 2019**, 63, 103788.
8. Arumugam Manikandan, Yu-Ze Chen, Chih-Chiang Shen, Chin-Wei Sher, Hao-Chung Kuo, and **Yu-Lun Chueh\***, “A Critical Review on Two-Dimensional Quantum Dots (2D QDs): From Synthesis Toward Applications in Energy and Optoelectronics”, ***Progress in Quantum Electronics***, **2019**, 100226.
9. ​Arumugam Manikandan, Pavithra Sriram, Kun-Chieh Hsu, Yi-Chung Wang, Chia-Wei Chen, Yu-Chuan Shih, Ta-Jen Yen, Horng-Tay Jeng, Hao-Chung Kuo, **Yu-Lun Chueh\***, “Electrochemically Active Novel Amorphous Carbon (a-C)/Cu3P Peapod Nanowires by Low-Temperature Chemical Vapor Phosphorization Reaction as High Efficient Electrocatalysts for Hydrogen Evolution Reaction”, **Electrochimica *Acta*, 2019**, 318, 20, 374-383.
10. ​Shan Zhang, Yuanfei Ai, Shu-Chi Wu, Hsiang-Ju Liao, Teng-Yu Su, Jyun-Hong Chen, Chuan-Hsun Wang, Ling Lee, Yu-Ze Chen, Binbin Xu, Shin-Yi Tang, Ding Chou Wu, Shao-Shin Lee, Jun Yin, Jing Li, Junyong Kang and **Yu-Lun Chueh\***, “3D CoMoSe4 Nanosheet Arrays Converted Directly From Hydrothermally Processed-CoMoO4 Nanosheet Arrays by Plasma-Assisted Selenization Process Toward Excellent Anode Material in Sodium-ion Battery”,**Nanoscale Research Letters, 2019**, 14, 213.
11. ​Nguyen Van Truong, Tzu-Yi Yang, Phuoc Anh Le, Po-Jen Yen, and Kung-Hwa Wei\* and **Yu-Lun Chueh\***, "A New Simultaneous Exfoliation and Doping Process for Generating MX2 Nanosheets for Electrocatalytic Hydrogen Evolution Reaction", **ACS Appl. Mater. Interfaces, 2019,** 11(16), 14786-14795.
12. Cuo Wu, Jing Zhang, Xin Tong, Peng Yu, Jing-Yin Xu, Jiang Wu, Zhiming Wang\*, Jun Lou\* and **Yu-Lun Chueh**\*, "A Critical Review on Enhancement of Photocatalytic Hydrogen Production by Molybdenum Disulfide: From Growth to Interfacial Activities", ***Small***, **2019**, 2019, 1900578.
13. Chia-Wei Chen, Hung-Wei Tsai, Yi-Chung Wang, Teng-Yu Su, Chen-Hua Yang, Wei-Sheng Lin, Zhan-Hong Lin, Jer-Shing Huang and **Yu-Lun Chueh**\*, “Design of Novel TiO2-SiO2 Core-Shell Helical Nanostructured Anti-Reflective Coatings on Cu(In,Ga)Se2 Solar Cells with Enhanced Power Conversion Efficiency”, ***Journal of Materials Chemistry A***, **2019**, 7,11452.
14. Yu-Ze Chen, Sheng-Wen Wang, Chun-Chuan Yang, Chieh-Han Chung, Yi-Chung Wang, Sung-Wen Huang Chen, Chia-Wei Chen, Teng-Yu Su, Heh-Nan Lin, Hao-Chung Kuo\* and **Yu-Lun Chueh**\*, "Indoor Light-Activated 3D Cone-Shaped MoS2 bilayers-based NO Gas Sensor with PPb-Level Detection at Room-temperature", ***Nanoscale***, **2019**, 11, 10410.
15. ​Van-Truong Nguyen, Tzu-Yi Yang, Phuoc Anh Le, Po-Jen Yen, and Kung-Hwa Wei\* and **Yu-Lun Chueh**\*, "A New Simultaneous Exfoliation and Doping Process for Generating MX2 Nanosheets for Electrocatalytic Hydrogen Evolution Reaction", ***ACS Appl. Mater. Interfaces***, **2019**, 11, 14786-14795.
16. Shin-Yi Tang, Henry Medina, Yu-Ting Yen, Chia-Wei Chen, Tzu-Yi Yang, Kung-Hwa Wei and **Yu-Lun Chueh**\*, "Enhanced Photo-Carrier Generation with Selectable Wavelengths by M-decorated-CuInS2 nanocrystals (M=Au and Pt) Synthesized in A Single Surfactant Process on MoS2 bilayers", **Small, 2019,** 1803529.
17. Wen-Wu Liu, Te-hui Wu, Mao-Cheng Liu,Wen-Jun Niuand **Yu-Lun Chueh**[[1]](#footnote-1)\*, “Recent Challenges in Perovskite Solar Cells Toward Enhanced Stability, Less Toxicity and Large-Area Mass Production”, ***Advanced Materials Interfaces,* 2019*,*** 1801758.
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1. [↑](#footnote-ref-1)