

## **Chen-Hao Wang Ph.D.**

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### **Education Background**

2002/9 – 2007/8 Ph.D., Department of Materials Science and Engineering, National Tsing Hua University, Taiwan

1997/9 – 1999/6 M.S., Department of Chemical Engineering, National Taiwan University, Taiwan

1993/9 – 1997/6 B.S., Department of Chemical Engineering, National Taiwan University, Taiwan

### **Professional Experiences in Academia**

2014/1 – 2014/2 Visiting Scholar, Argonne National Laboratory, USA

2012/7 – 2012/9 Visiting Scholar, Argonne National Laboratory, USA

2012/1 – 2014/1 Deputy Secretary-general, Taiwan Association for Coating and Thin Film Technology, Taiwan

2010/8 – 2014/2 Assistant Professor, Department of Materials Science and Engineering, National Taiwan University of Science and Technology, Taiwan

2010/1 – 2010/7 Postdoctoral Research Scholar, Center for Condensed Material Sciences, National Taiwan University, Taiwan

2009/1 – 2009/12 Postdoctoral Fellow, Center for Condensed Mater Sciences, National Taiwan University, Taiwan

2007/2 – 2008/7 Postdoctoral Fellow, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan

### **Fields of Expertise**

1. Electrochemical applications: Fuel cells, supercapacitors, flow batteries, electrolyzers
2. Nanotechnology: Carbon nanomaterials (nanotube, nanofiber, graphene), core-shell nanoparticles, hierarchical nanomaterials, photocatalysts.

### **Honors and Awards**

1. Excellent Yong Researcher Award granted from Taiwan Ministry of Science and Technology, 2015.
2. The Best Research and Creation Award of College Student Research Projects granted from Taiwan Ministry of Science and Technology, 2014.
3. The Best Project Awards of National Taiwan University of Science and Technology, 2013 & 2014.
4. Third Prize and Honorable Mention of Thesis Competition in the 32<sup>nd</sup> Taiwan Symposium of Catalysis and Reaction Engineering, 2014.
5. Two Honorable Mentions of Thesis Competition in International Thin Films Conference, 2013

6. First Prize of Thesis Competition in the 8<sup>th</sup> Taiwan Symposium of Hydrogen Energy and Fuel Cell, 2013.
7. Honorable Mentions of Thesis Competition in the 31<sup>st</sup> Taiwan Symposium of Catalysis and Reaction Engineering, 2013
8. Two Honorable Mentions of Thesis Competition in the 7<sup>th</sup> Taiwan Symposium of Hydrogen Energy and Fuel Cell, 2012.
9. Honorable Mentions of Thesis Competition in the 30<sup>th</sup> Taiwan Symposium of Catalysis and Reaction Engineering, 2012.
10. First Prize and Honorable Mention of Thesis Competition in the 6<sup>th</sup> Taiwan Symposium of Hydrogen Energy and Fuel Cell, 2011
11. Honorable Mention of Thesis Competition in the 29<sup>th</sup> Taiwan Symposium of Catalysis and Reaction Engineering, 2011.
12. First Prize of Thesis Competition in the 56<sup>th</sup> Annual Meeting of Taiwan Chemical Engineering, 2009.

### **Publication**

Over 38 papers in peer-reviewed journal, 5 book chapters, 91 conference presentations.

Selected 5 publications within Recent 3 Years (\*Corresponding Author)

1. Chen-Hao Wang\*, Chih-Wei Yang, Yu-Chuan Lin, Sun-Tang Chang, Shery L. Y. Chang, *Cobalt-iron(ii,iii) Oxide Hybrid Catalysis With Enhanced Catalytic Activities for Oxygen Reduction in Anion Exchange Membrane Fuel Cell*, **Journal of Power Sources**, **277 (2015) 147-154**.
2. Chen-Hao Wang\*, Hsin-Cheng Hsu, and Jin-Hao Hu, *High-energy Asymmetric Supercapacitor Based on Petal-shaped MnO<sub>2</sub> Nanosheet and Carbon Nanotube-embedded Polyacrylonitrile-based Carbon Nanofiber Working at 2 V in Aqueous Neutral Electrolyte*, **Journal of Power Sources** **249 (2014) 1-8**.
3. Hsin-Chih Huang, Chen-Hao Wang\*, Indrajit Shown, Sun-Tang Chang, Hsin-Cheng Hsu, He-Yun Du, Li-Chyong Chen, and Kuei-Hsien Chen\*, *High-Performance Pyrolyzed Iron Corrole as Potential Non-precious Metal Catalyst for PEMFC*, **Journal of Materials Chemistry A**, **1 (2013) 14692-14699**.
4. Hsin-Chih Huang, Indrajit Shown, Sun-Tang Chang, Hsin-Cheng Hsu, He-Yun Du, Ming-Cheng Kuo, Ken-Tsung Wong, Sea-Fu Wang, Chen-Hao Wang\*, Li-Chyong Chen, and Kuei-Hsien Chen\*, *Pyrolyzed Cobalt Corrole as Potential Non-precious Catalyst for Fuel Cells*, **Advanced Functional Materials** **22 (2012) 3500-3508**.
5. Sun-Tang Chang, Chen-Hao Wang\*, He-Yun Du, Hsin-Cheng Hsu, Chih-Ming Kang, Chia-Chun Chen, Chi-Sheng Wu, Shi-Chern Yen, Wen-Fei Huang, Li-Chyong Chen, M.C. Lin, and Kuei-Hsien Chen, *Vitalizing Fuel Cells with Vitamin: Pyrolyzed Vitamin B12 as Non-precious Catalyst for Enhanced Oxygen Reduction Reaction of Polymer Electrolyte Fuel Cell*, **Energy & Environmental Science** **5 (2012) 5305-5314**.