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B.S. in Chemical Engineering
National Cheng Kung University, 1978
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Research and Professional Interests

Electro-optical Materials and Devices
Transparent electrochromic batteries
Dye-sensitized solar cells
Nano thin film electrochemistry
Electrochemical Engineering/Technology
Nano-porous membranes
Green chemistry and nanomaterials
Metal-organic frameworks
Chemical and biological sensors

Journal Papers¹⁻⁴⁶

1. K. Stalindurai, A. Karuppasamy, J. D. Peng, **K. C. Ho**, A. Tamilselvan and C. Ramalingan, "Fused heterocycles possessing novel metal-free organic dyes for dye-sensitized solar cells", *Tetrahedron*, 73(3), 278-289, 2017(Jan)
2. T. Y. Chen, Y. J. Huang, C. T. Li, C. W. Kung, R. Vittal and **K. C. Ho**, "Metal-organic framework/sulfonated polythiophene on carbon cloth as a flexible counter electrode for dye-sensitized solar cells", *Nano Energy*, 32, 19-27, 2017(Feb), (SCI, EI)
3. Y. A. Leu, M. H. Yeh, L. Y. Lin, T. J. Li, L. Y. Chang, S. Y. Shen, Y. S. Li, G. L. Chen, W. H. Chiang, J. J. Lin and **K. C. Ho**, "Thermally Stable Boron-Doped Multiwalled Carbon Nanotubes as a Pt-free Counter Electrode for Dye-Sensitized Solar Cells", *Acs Sustainable Chemistry & Engineering*, 5(1), 537-546, 2017(Jan), (SCI, EI), (工合著)
4. C. T. Li, F. L. Wu, C. J. Liang, **K. C. Ho** and J. T. Lin, "Effective suppression of interfacial charge recombination by a 12-crown-4 substituent on a double-anchored organic sensitizer and rotating disk electrochemical evidence", *Journal of Materials Chemistry A*, 5(16), 7586-7594, 2017(Apr), (SCI, EI)
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6. K. W. Cheng, H. J. Jhang, C. T. Li and **K. C. Ho**, "Solution-growth-synthesized Cu(In,Ga)Se₂ nanoparticles in ethanol bath for the applications of dye-sensitized solar cell and photoelectrochemical reaction", *Journal of the Taiwan Institute of Chemical Engineers*, 74, 136-145, 2017(May), (SCI, EI)
7. C. P. Lee, K. Y. Lai, C. A. Lin, C. T. Li, **K. C. Ho**, C. I. Wu, S. P. Lau and J. H. He, "A paper-based electrode using a graphene dot/PEDOT:PSS composite for flexible solar cells", *Nano Energy*, 36, 260-267, 2017(Jun), (SCI, EI)
8. C. T. Li, C. P. Lee, I. T. Chiu, R. Vittal, Y. J. Huang, T. Y. Chen, H. W. Pang, J. T. Lin and **K. C. Ho**, "Hierarchical TiO_{1.1}Se_{0.9}-wrapped carbon cloth as the TCO-free and Pt-free

- counter electrode for iodide-based and cobalt-based dye-sensitized solar cells", *Journal of Materials Chemistry A*, 5(27), 14079-14091, 2017(Jul), (SCI,EI)
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35. M. Higuchi, H. C. Lu, and **K. C. Ho**, “Metal-Complex-based Electrochromic Device,” World Intellectual Property Organization No. wo2019177160 (2019).

Book Chapter

1. **K. C. Ho** and J. C. Chen, “Spectroelectrochemical Studies of Indium-Hexacyanoferrate Electrodes Prepared by the Sacrificial Anode Method”, in *Proceedings of the Third Symposium on Electrochromic Materials*, (**K. C. Ho**, C. B. Greenberg and D. M. MacArthur, eds), ISBN 978-1566771740, Chap. 10, Electrochemical Society, USA (1997).
2. **K. C. Ho**, C. W. Hu, and T. S. Varley, “Electrochromic Devices based on Metal Hexacyanometallate/Viologen Pairings”, in *Electrochromic Materials and Devices*, (R. J. Mortimer, D. R. Rosseinsky, P. M. S. Monk, eds.), ISBN 978-3-527-33610-4, Chap. 5, Wiley-VCH, Weinheim, Germany (2015).
3. **K. C. Ho**, H. W. Chen, and C. Y. Hsu, “Photoelectrochromic Materials and Devices”, in *Electrochromic Materials and Devices*, (R. J. Mortimer, D. R. Rosseinsky, P. M. S. Monk, eds.), ISBN 978-3-527-33610-4, Chap. 22, Wiley-VCH, Weinheim, Germany (2015).
4. C. P. Lee and **K. C. Ho**, “Ionic Liquid-based Polymers and Crystals for Dye-sensitized Solar Cells”, in *Polymerized Ionic Liquids*, RSC book series of Smart Materials, (A. Eftekhari ed.), ISBN 978-1-78262-960-3, Chap. 18, The Royal Society of Chemistry, London, UK (2018).
5. L. Y. Lin and **K. C. Ho**, “Dye-Sensitized Solar Cells”, in *The Encyclopedia of Modern Optics*, 2nd Edition, (B. Guenther ed.), ISBN 978-0-12809-283-5, Chap. X, Academic Press, Cambridge, MA, USA (2018).
6. **K. C. Ho**, H. C. Lu, and H. F. Yu, “Viologens-based Electrochromic Materials and Devices”, in *Electrochromic Smart Materials: Fabrication and Applications*, RSC book series of Smart Materials, (J. W. Xu ed.), ISBN 978-1-78801-143-3, Chap. 12, The Royal Society of Chemistry, London, UK (2019).

Technology Transfer

1. **Technology Transfer**: “Development of Electrochemical Cholesterol Sensors,” TaiDoc Technology Corp., 1,000,000 NT\$, Kuo-Chuan Ho, 4.1.2015.
2. **Technology Transfer**: “Fabrication of Electrochromic Devices Containing Conducting Polymers,” Heraeus Materials Technology Taiwan Ltd., 1,500,000 NT\$, Kuo-Chuan Ho,

5.1.2015.

Honors and Others

1. Honorary Scientific Committee, The International Conference on Advanced Batteries and Accumulators, Brno, Czech Republic (2001-present).
2. International Advisory Editorial Board, Sensors (2002-present).
3. Editorial Board, Analytical & Bioanalytical Electrochemistry (2008-present).
4. Editorial Board, Progress in Photovoltaics: Research and Applications (2009-present).
5. Editorial Board, International Journal of Photoenergy (2009-present).
6. Outstanding Research Award, The Ministry of Science and Technology (MOST) of Taiwan (2017).
7. The Young Scientist Award (to Mr. Chung-Wei Kung, 龔仲偉同學), in recognition of an outstanding paper contributed to Symposium L "Chromogenic Materials and Devices" at the E-MRS 2014 Spring Meeting, Lille, France, May 26-30 (2014).
8. The Young Scientist Award (to Mr. Jia-De Pong, 彭嘉德同學), in recognition of an outstanding paper contributed to Symposium Y "Advanced Materials and Characterization Techniques for Solar Cells II" at the E-MRS 2014 Spring Meeting, Lille, France, May 26-30 (2014).
9. 財團法人徐有庠先生紀念基金會「第 12 屆有科技庠講座」(綠色科技類) (2014).
10. 指導林燁雍同學榮獲科林博士論文優等獎 (2014)
11. 指導林宜鋒同學榮獲科林碩士論文頭等獎 (2016)
12. 指導陳貝瑜、李君婷、李權倍、范妙璇、高聖淵、黃子晏、龔仲偉與張廷祥同學論文榮登著名期刊封面與內頁封面(2015, 2017).
13. 指導朱德峻同學榮獲國科會 101 年度大專生研究計畫研究創作獎(2013)
14. 指導莊蕙閔同學榮獲國科會 102 年度大專生研究計畫研究創作獎(2014)
15. 指導陳貝瑜同學榮獲 103 年度科技部大專生研究計畫研究創作獎(2015)
16. 指導陳泰瑩同學榮獲 105 年度科技部大專生研究計畫研究創作獎(2017)
17. 第 22 屆成大化工系系友傑出成就獎 (2020)
18. 國立臺灣大學工學院 110 學年度斌彥先生講座 (2021)

International Cooperation Project

1. Multiresponsive, Hierarchically Organized Mesoporous Materials for Biosensors, Biofuel cells, Controlled Release, and Cell Culture Platform

新型多響應具層級式有序中孔洞材料於生物感測器,生物燃料電池,藥物控制釋放及細胞培養平台之開發與應用 (台灣-日本雙邊國際合作計畫)

Kuo-Chuan Ho, sponsored by the National Science Council, NSC103-2923-E-002-008 - MY3, NT\$ 1,339,000, 1/1/2016-12/31/2016

Conference or Special Event Host or Cohost

1. The Eleventh International Meeting on Electrochromism (IME-11), August 31-September 4, 2014, Taipei, Taiwan (136 participants).

