

## 洪哲文教授著作目錄:

### (A) Journal Papers (所有著作本人皆為通訊作者\*)

近五年著作 Impact Factor and Rank based on 2010 JCR Science Edition

- A059 C. H. Wu, Y. H. Hung and C. W. Hong\*,  
"On-Line Dynamic Models of Supercapacitors for Energy Conversion and Management," *Energy Conversion and Management*, Vol. 53, pp. 337-345, 1/2012 (**SCI, EI, IF 2.054, 14/132=10.6%, Mechanics 2010**) (DOI: 10.1016/j.enconman.2011.01.018, 2011)
- A058 Y. H. Hung, C. H. Wu and C. W. Hong\*  
"An Element-Oriented Model Simplification Algorithm Based on Dynamic Similarity," *ProcIMEchE, Part I: Journal of Systems and Control Engineering*, Vol. 226, pp. 56-69, 1/2012. (**SCI, EI, IF 0.374, 48/60=80% Engineering, Multidisciplinary 2010**) (DOI: 10.1177/0959651811409490, 2011)
- A057 C. H. San, C. W. Hong\*,  
"Molecular Design of the Solid Copolymer Electrolyte- Poly(styrene-b-ethylene oxide) for Lithium Ion Batteries", *CMC- Computers, Materials, & Continua*, Vol. 23, no. 2, pp. 101-117, 2011. (**SCI, EI, IF 1.360, 17/87=19.5%, Engineering Multidisciplinary 2010**)
- A056 C. W. Hong\*, W. H. Chen,  
"Computational Quantum Chemistry on the Photoelectric Characteristics of Semiconductor Quantum Dots and Biological Pigments", *CMES- Computer Modeling in Engineering & Sciences*, Vol.172, no.3, pp. 211-228, 2011. (**SCI, EI, IF 4.785, 1/76=1.32%, Mathematics, Interdisciplinary 2008**)
- A055 W. H. Chen, C. W. Hong\*,  
"Nano-Array Solid Electrode Design for Photoelectrochemical Solar Cells", *CMC- Computers, Materials, & Continua*, Vol. 21, no. 2, pp. 147-170, 2011. (**SCI, EI, IF 1.360, 17/87=19.5%, Engineering Mutidisciplinary 2010**)
- A054 W. H. Chen, A. G. Miranda, C. W. Hong\*,  
"Parametric Studies on the Photovoltaic Performance Improvement of a Novel Nanotube Photo-electrochemical Solar Cell", *Journal of The Electrochemical Society*, Vol. 158 (5), pp. 57-64, 2011. (**SCI, EI, IF 2.420, 1/18=5.5%, Materials Science, Coatings & Films 2010**)
- A053 C. W. Hong\*, C. Y. Tsai,  
"Computational Quantum Mechanics Simulation on the Photonic Properties of Group-III Nitride Clusters", *CMES- Computer Modeling in Engineering & Sciences*, Vol. 67, no. 2, pp. 79-94, 2010. (**SCI, EI, IF 4.785, 1/76=1.32%, Mathematics, Interdisciplinary 2008**)
- A052 K. Fei, T. S. Chen, C. W. Hong\*,  
"Direct Methanol Fuel Cell Bubble Transport Simulations via Thermal Lattice Boltzmann and Volume of Fluid Methods", *J. of Power Sources*, Vol. 195, pp. 1940-1945, 2010 (**SCI, EI, IF 4.283, 2/26=7.69%, Electrochemistry 2010**)
- A051 C. P. Chiu, C. W. Hong\*,  
"Magnetic Field Effect on the Hydronium Diffusivity at an Enzymatic Biofuel Cell Anode via Atomistic Analysis", *J. of Fuel Cell Science and Technology (ASME Transactions)*, Vol. 7, pp. 0210031-0210035, 2010 (**SCI, EI, IF 0.884, 49/78=62.8%, Energy & Fuels 2010**)

- A050 P. Y. Chen, C. W. Hong\*,  
 "Nanoscale Transport Dynamics inside a Hydrated Nafion Membrane with Electric Field Effects", *Fuel Cells*, Vol. 10(1), pp. 17-25, 2010. **(SCI, EI, IF 3.320, 18/78=23%, Energy & Fuels 2010)**
- A049 S. F. Lee, C. W. Hong\*,  
 "Multi-scale Design Simulation of an Intermediate-Temperature Planar Micro Solid Oxide Fuel Cell Stack", *Int. J. of Hydrogen Energy*, Vol. 35, pp. 1330-1338, 2010 **(SCI, EI, IF 4.053, 12/78=15.4%, Energy & Fuels 2010)**
- A048 S. F. Lee, C. W. Hong\*,  
 "Computer Modeling of Ionic Conductivity in Low Temperature Doped Ceria Solid Electrolytes", *CMC-Computers, Materials, & Continua*, Vol. 12 (3), pp. 223-235, 2009. **(SCI, EI, IF 1.360, 17/87=19.5%, Engineering Multidisciplinary 2010)**
- A047 Y. H. Chen, W. H. Chen, C. W. Hong\*,  
 "Molecular Simulation and Performance Prediction of Ionic Liquid Dye-Sensitized Solar Cells", *Journal of The Electrochemical Society*, Vol. 156(11), P163-P168, 2009. **(SCI, EI, IF 2.420, 1/18=5.5%, Materials Science, Coatings & Films 2010)**
- A046 P. Y. Chen, C. P. Chiu, C. W. Hong\*,  
 "Molecular Structure and Transport Dynamics in Nafion and Sulfonated Poly(Ether Ether Ketone Ketone) Membranes", *J. of Power Sources*, Vol. 194, pp. 746-752, 2009 **(SCI, EI, IF 4.283, 2/26=7.69%, Electrochemistry 2010)**
- A045 P. H. Lin, C. W. Hong\*,  
 "Cold Start Dynamics and Temperature Sliding Observer Design of an Automotive SOFC APU", *J. of Power Sources*, Vol. 187, pp. 517-526, 2009 **(SCI, EI, IF 4.283, 2/26=7.69%, Electrochemistry 2010)**
- A044 P. Y. Chen, C. P. Chiu, C. W. Hong\*,  
 "Molecular Analysis on Methanol Diffusion in a Model Nafion Membrane", *Journal of The Electrochemical Society*, Vol. 155 (12), B1255-1263, 2008. **(SCI, EI, IF 2.420, 1/18=5.5%, Materials Science, Coatings & Films 2010)**
- A043 K. Fei, W. H. Chen, C. W. Hong\*,  
 "Microfluidic Analysis of CO<sub>2</sub> Bubble Dynamics Using Thermal Lattice-Boltzmann Method", *Microfluidics and Nanofluidics*, Vol. 5, pp.119-129, 2008. **(SCI, EI, IF 3.507, 3/61=4.9%, Instruments & Instrumentation 2010)**
- A042 C. H. Cheng, P. Y. Chen, C. W. Hong\*,  
 "Atomistic Analysis of Hydration and Thermal Effects on Proton Dynamics in the Nafion Membrane", *Journal of The Electrochemical Society*, Vol. 155(4), B435-B442, 2008. **(SCI, EI, IF 2.420, 1/18=5.5%, Materials Science, Coatings & Films 2010)** Also selected and published by the Virtual Journal of Nanoscale Science & Technology, Vol. 17, Issue 11, Organic-Inorganic Hybrid Nanostructures, 2008.
- A041 K. Fei, C. P. Chiu, C. W. Hong\*,  
 "Molecular Dynamics Prediction of Nanofluidic Contact Angle Offset by an AFM", *Microfluidics and Nanofluidics*, Vol. 4, pp. 321-330, 2008. **(SCI, EI, IF 3.507, 3/61=4.9%, Instruments & Instrumentation 2010)**
- A040 Y.H. Hung, P.H. Lin, C.H. Wu, C. W. Hong\*,  
 "Real-Time Dynamic Modeling of Hydrogen PEMFCs", *Journal of The Franklin Institute*, Vol. 345, Issue 2, pp.182-203, 2008. **(SCI, EI, IF 1.492, 14/87=16.1%, Engineering Multidisciplinary 2010)**

- A039 P. Y. Chen, W. H. Chen, C. W. Hong,  
 "Nanofluidic Analysis on the Methanol Crossover of the Direct Methanol Fuel Cell", *Proceedings of the Micro/Nanoscale Heat Transfer International Conference*, pp. 131-132, 2008. (EI)
- A038 K. Fei, T. S. Chen, C. W. Hong,  
 "Thermal Lattice Boltzmann Simulation of Two-Phase Flow at the Anode Microchannel of Micro Direct Methanol Fuel Cells", *Proceedings of the Micro/Nanoscale Heat Transfer International Conference*, pp. 129-130, 2008. (EI)
- A037 C. H. Cheng, S. F. Lee, C. W. Hong\*,  
 "Ionic Dynamics of an Intermediate Temperature Yttria-Doped Ceria Electrolyte", *Journal of The Electrochemical Society*, Vol. 154(10), E158-E163, 2007. (SCI, EI, IF 2.420, 1/18=5.5%, Materials Science, Coatings & Films 2010)
- A036 S. F. Lee, C. H. Cheng, W. H. Chen, C. W. Hong\*,  
 "Nano-scale Analysis of Low Temperature Solid Oxide Fuel Cell Electrolytes", *Electro Chemical Society Transactions-Solid Oxide Fuel Cells*, Vol. 7, pp. 2253-2260, 2007. (EI)
- A035 C. H. Cheng, K. Fei, C. W. Hong\*,  
 "Computer Simulation of Hydrogen Proton Exchange Membrane and Direct Methanol Fuel Cells", *Computers and Chemical Engineering*, Vol. 31, pp. 247-257, 2007. (SCI, EI, IF 2.072, 19/97=19.6%, Computer Science, Interdisciplinary Applications 2010)
- A034 K. Fei, C. W. Hong\*,  
 "All-angle Removal of CO<sub>2</sub> Bubbles from the Anode Microchannels of a Micro Fuel Cell by Lattice Boltzmann Simulation", *Microfluidics and Nanofluidics*, Vol. 3, pp. 77-88, 2007. (SCI, EI, IF 3.507, 3/61=4.9%, Instruments & Instrumentation 2010)
- A033 C. H. Cheng, C. W. Hong\*,  
 "Investigation of Atomistic Scale Transport Phenomena of the Proton Exchange Membrane Fuel Cell", *J. of Fuel Cell Science and Technology (ASME Transactions)*, Vol. 4, pp.474-480, 2007 (SCI, EI, IF 0.884, 49/78=62.8%, Energy & Fuels 2010) Top 10 Most Downloaded Articles, ASME Digital Library, 2008
- A032 Y. H. Hung, C. W. Hong\*  
 "Bond Graph Modelling of Fuel Cell and Engine Hybrid Electric Scooters," *International Journal of Vehicle Design*, Vol. 45, No. 4, pp.533-541, 2007. (SCI, EI, IF 0.358, 94/122=77%, Engineering Mechanical 2010)
- 以上為近五年著作
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- A031 P. H. Lin, C. W. Hong\*,  
 "On the Start-up Transient Simulation of a Turbo Fuel Cell System", *J. of Power Sources*, Vol. 160, pp. 1230-1241, 2006. (SCI, EI, IF 4.283, 2/26=7.69%, Electrochemistry 2010)
- A030 K. Fei, C. H. Cheng, C. W. Hong\*,  
 "Lattice Boltzmann Simulations of CO<sub>2</sub> Bubble Dynamics at the Anode of a  $\mu$ DMFC", *J. of Fuel Cell Science and Technology (ASME Transactions)*, Vol. 3, pp. 180-187, 2006. (SCI, EI, IF 0.884, 49/78=62.8%, Energy & Fuels 2010)
- A029 C. H. Cheng, S. F. Lee, C. W. Hong,

- "Molecular Dynamics of Proton Exchange inside a Nafion Membrane", *Proceedings of the 4<sup>th</sup> ASME Int. Conf. on Fuel Cell Science, Engineering and Technology*, pp. 253-257, 2006. (EI)
- A028 C. P. Chiu, P. Y. Chen, C. W. Hong,  
"Atomistic Analysis of Proton Diffusivity at Enzymatic Biofuel Cell Anode", 4<sup>th</sup> *Proceedings of the 4<sup>th</sup> ASME Int. Conf. on Fuel Cell Science, Engineering and Technology*, pp. 259-263, 2006. (EI)
- A027 P. H. Lin, W. C. Lin, C. W. Hong\*,  
"Cold Start Dynamics and Control of the SOFC APU for Automotive Applications", *Proc. of Int. Sym. on Advanced Vehicle Control*, Vol. 1, pp. 523-528, 2006. (EI)
- A026 C. H. Wu, W. C. Lin, C. W. Hong\*,  
"Ultracapacitor Dynamics for Fuel Cell Vehicle Control", *Proc. of Int. Sym. on Advanced Vehicle Control*, Vol. 1, pp. 529-534, 2006. (EI)
- A025 C. H. Cheng, Y. W. Chang, C. W. Hong\*,  
"Multi-Scale Parametric Studies on the Transport Phenomenon of a Solid Oxide Fuel Cell", *J. of Fuel Cell Science and Technology (ASME Transactions)*, Vol. 2, pp. 219-225, 2005. (SCI, EI, IF 1.000, 49/78=62.8%, Energy & Fuels )
- A024 K. Fei, C. H. Cheng, C. W. Hong,  
"Lattice Boltzmann Simulations of Bubble Dynamics in the Micro DMFC", *Proceedings of the 3<sup>rd</sup> ASME Int. Conf. on Fuel Cell Science, Engineering and Technology*, pp. 9-14, 2005. (EI)
- A023 Y. H. Hung, C. H. Wu, C. W. Hong\*  
"An Adaptive Real-Time Hybrid Electric Vehicle Simulator Using On-Line Identification Method", *Proc. of Int. Sym. on Advanced Vehicle Control*, Vol. 1, pp. 719-724, 2004. (EI)
- A022 Y. H. Hung, C. W. Hong\*  
"Bond Graph Dynamics of a Rubber-Belt Continuously Variable Transmission," *International Journal of Vehicle Design*, Vol. 35, No. 4, pp. 383-398, 2004. (SCI, EI, IF 0.480, 94/122=77%, Engineering Mechanical )
- A021 C. W. Hong, C. H. Cheng, K. Fei  
"A Simplified Three-Dimensional CFD Approach for PEMFC and DMFC Design, " *Proceedings of the ASME 1<sup>st</sup> Int. Conf. On Fuel Cell Science, Engineering and Technology*, pp. 203-208, 2003. (EI)
- A020 Y. H. Hung, P. H. Lin, C. W. Hong\*  
"A Rule-Based Control Algorithm for Hybrid Electric Motorcycle Powertrain Systems," *Proc. of International Symposium on Advanced Vehicle Control*, Vol. 1, pp. 523-528, 2002. (EI)
- A019 P. H. Lin, Y. H. Hung, C. W. Hong\*  
"Simulation and Controller Design of a Fuel Cell Motorcycle," *Proc. of International Symposium on Advanced Vehicle Control*, Vol. 1, pp. 279-284, 2002. (EI)
- A018 洪哲文\*, 洪翊軒, 林博煦  
"PEMFC燃料電池系統設計及模擬之發展及方向"  
*化工(中國化學工程學會-質子交換膜燃料電池專刊)*, 第49卷, 第3期, pp. 38-50, 2002 (EI, invited paper)
- A017 C. W. Hong\*, S. D. Tarng

- "In-Cylinder Tumble Flow Field Measurements and Predictions," *ASME Transaction J. of Engineering for Gas Turbines and Power*, Vol. 123, pp. 139-145, 2001. **(SCI, EI, IF 0.735, 51/105 Engineering, Mechanical)**
- A016 Y. H. Hung, C. W. Hong\*  
 "Dynamic Modeling and Powertrain Management of a Hybrid Electric Scooter," *International Symposium on Advanced Vehicle Control*, Vol. 1, pp. 26-30, 2000. **(EI)**
- A015 C. W. Hong\*, S. D. Tarnq  
 "Direct Measurement and Computational Analysis of Turbulence Length Scales of a Motored Engine," *Experimental Thermal and Fluid Science*, Vol. 16, pp. 277-285, 1998. **(SCI, EI, IF 1.037, 28/122=23% Engineering, Mechanical )**
- A014 C. W. Hong\* and G. H. Huang  
 "Numerical Computation of Unsteady Gas Flow in the Ducts of Reciprocating Engines," *Numerical Heat Transfer, Part A: Applications*, Vol. 32, pp. 769-785, 1997. **(SCI, EI, IF 1.183, 19/51=37.3% Thermodynamics )**
- A013 C. W. Hong\*, D. G. Chen  
 "Measurements of Temporal and Spatial Characteristics of In-Cylinder Turbulent Flowfields," *Proc. of the NSC, Part A: Physical Science and Engineering*, Vol. 21, No. 5, pp. 493-504, 1997. **(EI)**
- A012 C. W. Hong\*, C. C. Chen  
 "Dynamic Performance Simulation of a CVT Motorcycle for Fuzzy Autopilot Design," *Journal of Automobile Engineering, Part D, Proc Instn Mech Engrs*, Vol. 211, pp. 477-490, 1997. **(SCI, EI, IF 0.342, 19/23 Transportation Science & Technology)**
- A011 C. W. Hong\* and D. G. Chen  
 "Direct Measurement of In-Cylinder Integral Length Scales of a Transparent Engine," *Experiments in Fluids*, Vol. 23, No. 2, pp. 113-120, 1997. **(SCI, EI, IF 1.854, 10/105 Engineering, Mechanical)**
- A010 C. W. Hong\* and Y. C. Lee  
 "Dynamic Modeling and Experimental Verification of Road Vehicle Driving," *Journal of Chinese Institute of Engineers*, Vol. 20, No. 3, pp. 1-12, 1997. **(SCI, EI, IF 0.227, 62/68 Engineering, Multidisciplinary)**
- A009 C. W. Hong\*  
 "Modelling and Simulation of Spark Ignition Engines for Control System Design," *International Journal of Modelling & Simulation*, Vol. 17, No. 1, pp. 12-19, 1997. **(SCI, EI, IF 0.386, 71/82 Computer Science, Software Engineering)**
- A008 C. W. Hong\*  
 "Tuning the Fuzzy Control Autopilot Strategy for Driving Pattern Simulation of Road Vehicles," *International Journal of Vehicle Design*, Vol. 18, No. 1, pp. 35-52, 1997. **(SCI, EI, IF 0.389, 17/23 Transportation Science & Technology)**
- A007 C. W. Hong\* and T. W. Shio  
 "Fuzzy Control Strategy Design for an Autopilot on Automobile Chassis Dynamometer Test Stands," *Mechatronics*, Vol. 6, No. 3, pp. 537-555, 1996. **(SCI, EI, IF 1.434, 19/105 Engineering, Mechanical)**
- A006 C.W. Hong\* and G. H. Tzeng  
 "Parametric Studies of In-Cylinder Pre-Combustion Turbulent Flow Field of A Transparent Engine Using FLDV," *Journal of Chinese Institute of Engineers*,

- Vol. 19, No. 1, pp. 101-110, 1996. (**SCI, EI, IF 0.227, 62/68 Engineering, Multidisciplinary**)
- A005 C. W. Hong\*  
 "Dynamic Simulation of Road Vehicle Performance under Transient Accelerating Conditions," *Journal of Automobile Engineering, Part D, Proc Instn Mech Engrs*, Vol. 210, No. D1, pp. 11-21, 1996. (**SCI, EI, IF 0.280, 15/22 Transportation Science & Technology**)
- A004. C. W. Hong\*  
 "Modeling And Fuzzy Autopilot Control Simulation of A Motorcycle with CVT," *Proc. of International Symposium on Advanced Vehicle Control*, Vol. 2, pp. 1071-1086, 1996. (**EI**)
- A003 C. W. Hong\* and G. Y. Huang  
 "In-Cylinder Turbulent Flow Field Measurement of a Single Cylinder Transparent Engine Using FLDV," *Journal of The Chinese Society of Mechanical Engineers*, Vol. 16, No. 5, pp.457-466, 1995. (**SCI, EI**)
- A002 C. W. Hong\*  
 "A Fuzzy Throttle Controller for Dynamic Driving Pattern Simulation," *International Journal of Vehicle Design*, Vol. 16, Nos 2/3, pp.203-218, 1995. (**SCI, EI, IF 0.389, 17/23 Transportation Science & Technology**)
- A001 C. W. Hong\*  
 "An Automotive Dynamic Performance Simulator for Vehicular Powertrain System Design," *International Journal of Vehicle Design*, Vol. 16, Nos 2/3, pp. 254-281, 1995. (**SCI, EI, IF 0.389, 17/23 Transportation Science & Technology**)

## **(B) Conference Papers**

- B108. 陳偉暉, 李書鋒, 劉軍廷, 洪哲文  
 "計算質傳應用於新穎光電化學太陽電池發電性能改進設計," 第二十八屆全國機械工程學術研討會, 台中, 12/2011.
- B107. 陳偉暉, 李書鋒, 劉軍廷, 洪哲文  
 "分子動力學應用於光電化學太陽電池陽極奈米陣列設計," 第三十五屆全國力學會議, 台南, 11/2011. (學生論文獎熱流能源組第三名)
- B106. 陳偉暉, 李書鋒, 王湘靈, 洪哲文, "生物葉綠素應用於光電化學太陽電池之量子力學計算與性能評估", 2011 國際生物力學研討會暨台灣生物力學學會年會, 新竹, 10/2011.
- B105. 陳偉暉, 李書鋒, 洪哲文  
 "計算量子力學應用於光電化學太陽電池新穎染料分子設計," 第 18 屆全國計算流體力學研討會, 宜蘭, 8/2011
- B104. C. W. Hong  
 "Quantum Research on Biofuel Cells, Bio Solar Cells and OLEDs", Emerging Information and Technology Conference 2011, University of Chicago, Chicago, USA, 7/2011. (**Invited Speech, Int. Conference Co- Organizer**)
- B103. C. W. Hong  
 "Green Power Research for Future Propulsion", International Forum on Advanced Vehicle Technologies and Integration (VTI 2011), Changchun, China,

7/16-18, 2011 (**Invited Plenary Keynote Speech**)

- B102. C. W. Hong, T. S. Chen  
"Novel Fuel Cell Electric Vehicle Air Conditioner Design Using Thermoelectric Chips Powered by Photoelectrochemical Cells", 10<sup>th</sup> Int. Sym. on Advanced Vehicle Control (AVEC2010), Loughborough, UK, 8/2010. (**International Conference Session Chair**)
- B101. C. W. Hong  
"Direct Conversion of Green Energy: from Quantum to System Engineering", Energy Information and Technology Conference 2010, Stanford University, San Francisco, USA, 8/2010. (**Invited Speech, Int. Conference Co- Chair**)
- B100. W. H. Chen, Y. H. Chen, C. W. Hong,  
"Ionic Liquid Diffusivity in the Titanium Dioxide Nano-rod Array for Photoelectrochemical Cells", 18th International Conference on Photochemical Conversion and Storage of Solar Energy (IPS-18), Korea University, Seoul, Korea, July 25~30, 2010.
- B099. C. H. San, C. W. Hong,  
"Molecular Analysis of Poly Styrene Concentration Effect on Poly Ethylene Oxide Based Electrolytes for Lithium Ion Batteries", 217th ECS Meeting, Vancouver, BC, Canada, 4/2010.
- B098. 林勝賢, 邱創斌, 洪哲文  
"酵素型生物燃料電池奈米質傳模擬與實作實驗量測," 第三十三屆全國力學會議, 苗栗, 11/2009. (碩士論文發表佳作獎)
- B097. 唐維忠, 陳偉暉, 洪哲文  
"光電化學太陽電池離子擴散分子模擬與實作實驗," 第三十三屆全國力學會議, 苗栗, 11/2009. (碩士論文發表佳作獎)
- B096. 陳珮弦, 田鈞揮, 洪哲文  
"微型固態氧化物燃料電池應用於輔助動力系統冷啟動控制模擬與分析," 第二十六屆全國機械工程學術研討會, 台南, 11/2009.
- B096. 洪翊軒, 田鈞揮, 吳建勳, 洪哲文  
"節能車輛動力尺寸匹配之最佳化設計系," 第二十六屆全國機械工程學術研討會, 台南, 11/2009.
- B095. 孫志銘, 蔡佳妘, 洪哲文  
"染料敏化太陽電池動態模式建立與電動車致冷晶片冷氣應用," 第二十六屆全國機械工程學術研討會, 台南, 11/2009.
- B094. C. W. Hong  
"Molecular Quantum Mechanics and Multiscale Design of Fuel Cells, Photoelectrochemical Solar Cells and Green Power Engines", Energy Information and Technology Conference 2009, MIT, Boston, USA, 8/2009. (**Invited Speech**)
- B093. C. W. Hong  
"Multiscale Design of Green Power Engines", AUTO21, Canada-Taiwan Automotive Symposium, Taipei, 7/2009. (**Invited Speech**)
- B092. C. P. Chiu, S. H. Lin and C. W. Hong  
"Nano- and Micro-Scale Transport Phenomena in the Photoelectrochemical Enzymatic Biofuel Cells", The 20th International Symposium on Transport Phenomena, Victoria BC, Canada, 7-10 July, 2009. (**International Conference Scientific Committee and Session Chair**)

- B091 W. H. Chen, Y. H. Chen, W. C. Tarng and C. W. Hong  
 “Molecular Modeling of Transport Phenomena in the Photoelectrochemical Cells for Electricity and Hydrogen Production”, The 20th International Symposium on Transport Phenomena, Victoria BC, Canada, 7-10 July, 2009. **(International Conference Scientific Committee and Session Chair)**
- B090. Shu-Feng Lee, Peng-Yu Chen, Che-Wun Hong  
 “Molecular Modeling of Samarium-doped Ceria (SDC) and Gadolinium-doped Ceria (GDC) for Solid Oxide Fuel Cell Electrolytes”, The 3<sup>rd</sup> National Conference on Hydrogen Energy and Fuel Cells, Tainan, 11/2008.
- B089. C. W. Hong  
 “Multiscale Design of Fuel Cell/Solar Cell Power for Automotive Applications”, 13<sup>th</sup> National Conference on Vehicle Engineering, Taipei County, 10/2008 **(Domestic Conference Plenary Keynote Speech)**
- B088. Y. M. Sun, C. H. Wu, C. W. Hong  
 "AC Impedance Analysis of Supercapacitors for Hybrid Fuel Cell Vehicle Control", 9<sup>th</sup> Int. Sym. on Advanced Vehicle Control (AVEC2008), Kobe, Japan, 10/2008. **(International Conference Session Chair)**
- B087. T. S. Chen, C. W. Hong  
 "Two-Phase Microchannel Flow Simulation Using TLBM and VOF", The 19<sup>th</sup> International Symposium on Transport Phenomena, Reykjavik, Iceland, 8/2008.
- B086. C. W. Hong, Y. H. Chen, S. C. Wu,  
 "Nanoscale Transport Phenomena in the Ionic Liquid Electrolyte of Dye Sensitized Solar Cells", The 19<sup>th</sup> International Symposium on Transport Phenomena, Reykjavik, Iceland, 8/2008. **(International Conference Session Chair)**
- B085. C. W. Hong,  
 “Ionic Conductivity of the Ionic Liquid electrolyte in Dye Sensitized Solar Cells”, Cross-strait Tsing Hua Energy Technology Workshop, Hsinchu, Taiwan, 7/2008. **(Invited Speech)**
- B084. C. W. Hong,  
 “Molecular Analysis of Hydronium Diffusivity in Enzymatic Bio Fuel Cells”, Cross-strait Tsing Hua Energy Technology Workshop, Hsinchu, Taiwan, 7/2008. **(Invited Speech)**
- B083. P. Y. Chen, W. H. Chen, C. W. Hong,  
 "Nanofluidic Analysis on the Methanol Crossover of the Direct Methanol Fuel Cell", ASME Micro/Nanoscale Heat Transfer International Conference, Tainan, Taiwan, 1/2008.
- B082. K. Fei, T. S. Chen, C. W. Hong,  
 "Thermal Lattice Boltzmann Simulation of Two-Phase Flow at the Anode Microchannel of Micro Direct Methanol Fuel Cells", ASME Micro/Nanoscale Heat Transfer International Conference, Tainan, Taiwan, 1/2008.
- B081. C. W. Hong,  
 "Multiscale Analysis and Design of Various Fuel Cells and Solar Cells", Cross-strait Tsing Hua Energy Technology Workshop, Beijing, China, 9/2007. **(Invited Speech)**
- B080. C. P. Chiu, Z. L. Yu, C. W. Hong,  
 "Magnetic Field Effect on the Hydronium Diffusivity at an Enzymatic Biofuel Cell Anode Via Atomistic Analysis", 5<sup>th</sup> ASME Int. Conf. on Fuel Cell Science, Engineering and Technology, New York, USA, 6/2007.



- B079. P. Y. Chen, C. H. Cheng, C. W. Hong,  
 "Atomistic Simulation of Methanol and Proton Dynamics inside the  $\mu$ DMFC Electrolyte", 5<sup>th</sup> ASME Int. Conf. on Fuel Cell Science, Engineering and Technology, New York, USA, 6/2007.
- B078. S. F. Lee, C. H. Cheng, W. H. Chen, C. W. Hong,  
 "Nano-scale Analysis of Low Temperature Solid Oxide Fuel Cell Electrolytes", Tenth International Symposium on Solid Oxide Fuel Cells (SOFC-X), Nara, Japan, June 3-8, 2007.

以上為近五年著作

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### **(BB) Invited Special Topic Speech**

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- BB33. "Quantum Research on Biofuel Cells, Bio Solar Cells and OLEDs", Emerging Information and Technology Conference 2011, University of Chicago, Chicago, USA, 7/2011.

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- BB31. "Green Energy Research: from Quantum to System," Nanyang Technological University, Singapore, 2/15/2011.
- BB30. "Past, Current and Future of Green Power Engineering," National United University, Miaoli, 10/2010.
- BB29. "Direct Conversion of Green Energy: from Quantum to System Engineering", Emerging Information and Technology Conference 2010, Stanford University, San Francisco, USA, 8/2010. (美國能源資訊科技會議邀請專題演講)
- BB28. "Green Energy: from Quantum to System Engineering," National Chung Cheng University, Chiayi, 5/2010.
- BB27. "Green Power Mechanical Engineering: from Quantum to System Dynamics," National Tsing Hua University, Hsinchu, 3/2010.
- BB26. "Computational Quantum Molecular Dynamics and Multi-scale Design", Miaoli, 11/2009 (台灣第 33 屆全國力學會議計算力學論壇邀請專題演講)
- BB25. "Molecular Quantum Mechanics and Multiscale Design of Fuel Cells, Photoelectrochemical Solar Cells and Green Power Engines", Energy Information and Technology Conference 2009, MIT, Boston, USA, 8/2009(美國能源資訊科技會議邀請專題演講)
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- BB20. "Multiscale Design of Fuel Cell/Solar Cell Power for Automotive Applications", Plenary Speech invited by the 13<sup>th</sup> National Conference on Vehicle Engineering, Taipei, 10/2008 (台灣車輛工程年會邀請專題演講)
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- BB18. "Fuel Cell System Design for Automotive Applications", Plenary Speech invited by the KSAE, Seoul, 12/2005 (韓國汽車工程學會邀請專題演講)
- BB17. "Longitudinal Vehicle Dynamics and Control Research for Fuel Cell Hybrid Electric Scooters", Plenary Speech invited by the JSAE, Tokyo, 12/2004 (日本汽車工程學會邀請專題演講)
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- BB15. "Multi-scale Simulation and Design of Various Fuel Cells," Chung-Hua University, Hsinchu, 2003.
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#### (D) Patents

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#### (E) Awards and Honors

- E050. 國科會傑出研究獎(100 年度, 8/2011~7/2014)
- E049. 國立清華大學學術卓越獎勵 2007, 2008, 2009, 2010, 2011
- E048. 國科會資薪計畫 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011
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- E046. Co-Organizer of Emerging Information and Technology Conference EITC-2011, University of Chicago, 7/2011
- E045. Co-Organizer of Emerging Information and Technology Conference EITC-2010, Stanford University, 8/2010
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- E043. Editorial Board, Journal of the Chinese Society of Mechanical Engineers, 10/2009~ (SCI 期刊編輯委員)
- E042. International Scientific Committee Member, International Symposium on Transport Phenomena, 2008, 2009, 2010 (ISTP 國際會議學術委員)
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- E038. 國科會產學合作計畫專案複審委員 3/2011~
- E037. 國科會機電能源組複審委員 2/2008~1/2011
- E036. 國科會熱流能源學門規劃委員 10/2006
- E035. 竹苗區車輛行車事故鑑定委員 8/1996~7/2010
- E034. Scientific Committee Member, International Symposium on Advanced Vehicle Control (AVEC), 2006, 2008, 2010, 2012 (AVEC 國際會議委員會)
- E033. Technical Program Committee Member, 2006 IEEE Conference on SMC
- E032. Co-Editor, Vehicle System Dynamics (EI, SCI), 8/2006~7/2008 (國際 SCI 期刊副編輯)
- E031. Guest Editor, JSAE Review of Automotive Engineering, 10/2006 (國際 SCI 期刊客座編輯)
- E030. Guest Editor, Special Issue of AVEC'06 for Vehicle System Dynamics, 10/2006 (國際 SCI 期刊客座總編輯) Vol. 45, No. 5, pp. 397-503, May 2007.
- E029. Editor-in-Chief, Proceedings of the AVEC'06, 8/2006 (ISBN 10:986-00-5947-0) (總編輯)
- E028. General Chairman of the 8<sup>th</sup> International Symposium on Advanced Vehicle Control (AVEC '06) (國際學術會議總主席兼舉辦人, 參與人數 210 人, 國外共 164 人, 台灣 46 人)
- E027. Plenary Keynote Speech invited by the Society of Automotive Engineers of China (China-SAE), China Association of Automobile Manufactures (CAAM), FAW Group, and Jilin University, Changchun, 7/2011 (中國汽車工程學會、中國汽車工業協會、中國一汽、吉林大學邀請專題演講)
- E026. "Computational Quantum Molecular Dynamics and Multi-scale Design", Mioli, 11/2009 (台灣第 33 屆全國力學會議計算力學論壇邀請專題演講)

- E025. “Molecular Quantum Mechanics and Multiscale Design of Fuel Cells, Photoelectrochemical Solar Cells and Green Power Engines”, Energy Information and Technology Conference 2009, MIT, Boston, USA, 8/2009 (美國能源資訊科技會議邀請專題演講)
- E024. “Multiscale Design of Green Power Engines”, AUTO21, Taipei, 7/2009(加拿大車輛研發聯盟邀請專題演講)
- E023. “Multiscale Simulation of Green Power Sources”, National Research Center, Vancouver, Canada, 7/2009 (加拿大國家研究中心邀請專題演講)
- E022. Plenary Speech invited by the 13<sup>th</sup> National Conference on Vehicle Engineering, Taipei, 10/2008 (台灣車輛工程年會邀請專題演講)
- E021. Plenary Speech invited by the KSAE, Seoul, 2005 (韓國汽車工程學會邀請專題演講)
- E020. Plenary Speech invited by the JSAE, Tokyo, 2004 (日本汽車工程學會邀請專題演講)
- E019. Plenary Speech invited by the Automotive Manufacturers Association-European Commission, Istanbul, 2004 (歐盟汽車工程學會邀請專題演講)
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- E017. 陳偉暉(指導教授:洪哲文), 中國機械工程學會博士論文獎第二名, 2011
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- E001. 羅金國(指導教授:洪哲文), 燃燒學會最佳論文獎, 1997

#### (F) International Conference Chairs

- F009. Energy Information and Technology Conference 2011 (EITC2011), University of Chicago, Chicago, USA, 7/2011. (**Int. Conference Co-Organizer and Session Chair**)
- F008. Energy Information and Technology Conference 2010 (EITC2010), Stanford University, San Francisco, USA, 8/2010. (**Int. Conference Co-General Chair**)
- F007. 10<sup>th</sup> Int. Sym. on Advanced Vehicle Control (AVEC2010), Loughborough, UK, 8/2010. (**International Conference Session Chair**)
- F006. The 20<sup>th</sup> International Symposium on Transport Phenomena, Victoria, BC, Canada, 7/2009. (**International Conference Session Chair**)
- F005. 9<sup>th</sup> Int. Sym. on Advanced Vehicle Control (AVEC2008), Kobe, Japan, 10/2008.

**(International Conference Session Chair)**

- F004. The 19<sup>th</sup> International Symposium on Transport Phenomena, Reykjavik, Iceland, 8/2008. **(International Conference Session Chair)**
- F003. 8<sup>th</sup> Int. Sym. on Advanced Vehicle Control (AVEC2006), Taipei, Taiwan, 8/2006. **(International Conference General Chair)**
- F002. 7<sup>th</sup> Int. Sym. on Advanced Vehicle Control (AVEC2004), Arnhem, Netherlands, 8/2004. **(International Conference Session Chair)**
- F001. ASME 1<sup>st</sup> Int. Conf. On Fuel Cell Science, Engineering and Technology, Rochester, NY, USA, 4/2003. **(International Conference Session Chair)**