

馬振基 清華特聘講座教授 國家講座主持人

CHEN-CHI M. MA,
Tsing Hua Distinguished Chair PROFESSOR
National Chair Professor (MOE)



- 國立成功大學 化工學士，民國五十八年
- 美國北卡羅萊納州立大學 化工碩士，民國六十四年
- 美國北卡羅萊納州立大學 化工博士，民國六十七年
- B.S. National Cheng Kung University, ROC, 1969
- M.S. North Carolina State University, USA, 1975
- Ph.D. North Carolina State University, USA, 1978
- Monsanto Co., Lord Corp., Phillips Petroleum Co. USA. Senior Research Engineer (1977~1984)

主要研究領域

- 奈米材料與環境及防火材料之製備，鑑定與分析
 - 奈米級及分子級複合材料製備與特性之研究。(石墨烯, 碳奈米管, 奈米碳片, 碳纖維等奈米複材)。
 - 防火、難燃、耐高溫複合材料。
 - 環境相容性材料與防霉抗菌材料製造技術之研究。
- 風光綠能材料之製備、檢測研究
 - 複合材料風力發電機葉片及零組件 研製與測試之研究。
 - 全鈳液流及PEM燃料電池用高分子複合材料雙極板之製備與性能研究。
 - 染料敏化太陽能電池高分子複合材料電極之研製與性能之研究。
- 高性能複合材料之製程與檢測
 - 高性能工程塑膠及複合材料 動態粘彈性、形態學、結晶行為及機械性質等之研究。
 - 高性能工程橡膠(彈性體)及複合材料 加工性及製程研究。
 - 熱固性樹脂(POSS, PSSQ, Epoxy, Phenolic, PU, PI, PEI等) 反應動力學及化學流變學之研究。
- 生醫材料製備與應用
 - 藥物/基因傳遞與癌症治療(奈米碳管, 石墨烯, 石墨帶)。
 - 生醫影像診斷與治療(石墨烯, 金桿)。
 - 生物感測器在疾病初期診斷之研究。

Main Research Interests

- Nanomaterials、Ecomaterials and Fire resistance Materials — Preparation and Characterization.
 - Preparation, characterization and properties of nanometer and molecular composites. (Graphene, MWCNT, NGP and VGCF, etc)
 - Investigation on the manufacturing and characterization of fire resistant, flame retardant, high temperature composites.
 - Processing and evaluation of environmental conscious materials and antimicrobial materials.
- Wind Energy, Fuel cell and Solar Energy Materials — Preparation and Testing.
 - Composite Material for Wind Turbine Blade and Components.
 - Polymer Composite Bipolar plate for VRB and PEM Fuel Cell.
 - Polymer Composite Electrodes for Dye Sensitized Solar cell.
- Advanced Composite Materials (ACM) — Processing and Evaluation
 - High performance engineering thermoplastics — dynamic viscoelasticity, morphology, crystallization, electrical, thermal, EMI, ESD and mechanical properties.
 - Advanced engineering elastomers — processability and manufacturing.
 - Kinetics and chemorheology of thermoset resins (POSS, PSSQ, epoxy, phenolic, PU, PI, PEI etc...)
- Preparation and Application of Carbon-based Biomaterials
 - Drug/Gene delivery and Cancer therapy (Carbon Nanotube, Graphene, Graphene Ribbons)
 - Biomedical image for Diagnosis and Treatment (Graphene, Gold Nanorod)
 - Biosensor Research in the Early Diagnosis of Disease. (Graphene)

代表作 (Selected Publications)

- Shin-Ming Li, Shin-Yi Yang, Yu-Sheng Wang, Hsiu-Ping Tsai, Hsi-Wen Tien, Sheng-Tsung Hsiao, Wei-Hao Liao, Chien-Liang Chang, **Chen-Chi M. Ma*** and Chi-Chang Hu*, "N-doped structures and surface functional groups of reduced graphene oxide and their effect on the electrochemical performance of supercapacitor with organic electrolyte", Journal of Power Sources, 278: 218-229, 2015. (5-year IF: 6.23)
- Hung-Wei Yang, Chih-Wen Lin, Mu-Yi Hua, Shih-Sheng Liao, Ying-Tzu Chen, Hsiao-Chien Chen, Wen-Hui Weng, Cheng-Keng Chuang, See-Tong Pang, **Chen-Chi M. Ma***, "Combined detection of cancer cells and a tumor biomarker using an immunomagnetic sensor for the improvement of prostate-cancer diagnosis", Advanced Materials, 26(22), 3362-3666, 2014. (5 years IF: 18.17)
- Hung-Wei Yang, Chiung-Yin Huang, Chih-Wen Lin, Hao-Li Liu, Chia-Wen Huang, Shih-Sheng Liao, Pin-Yuan Chen, Yu-Jen Lu, Kuo-Chen Wei, **Chen-Chi M. Ma***, "Gadolinium-functionalized nanographene oxide for combined drug and microRNA delivery and magnetic resonance imaging.", Biomaterials, 35(22): 6534-6542, 2014. (5-year IF: 9.31)
- Hsiao, Min Chien, **Chen-Chi M. Ma***, Chiang, Jen-Chi, Ho, Kuan-Ku, Chou, Tsung-Yu, Xiaofeng, Xie, Hsieh, Chien-Kuo, "Thermally conductive and electrically insulating epoxy nanocomposites with thermally reduced graphene oxide-silica hybrid nanosheets", Nanoscale, 5(13):5863-71, 2013. (5-year IF: 7.76)
- Yuan-Li Huang, Avinash Baji, Hsi-Wen Tien, Ying-Kui Yang, Sheng-Yen Wu, **Chen-Chi M. Ma***, Hong-Yuan Liu, Yiu-Wing Mai, Nian-Hau Wang, "Self-Assembly of Graphene Decorated with Silver Nanoparticles onto Electrospun Polyurethane Nanofibers as Flexible Transparent Conductive Thin Films", Carbon, 50: 3473-3481, 2012. (5-year IF: 6.89)
- Min-Chien Hsiao, Shu-Hang Liao, Yu-Feng Lin, Cheng-Chih Weng, **Chen-Chi M. Ma***, Shie-Heng Lee, Han Min Tsai, Ming-Yu Yen and Po-I Liu, "Polypropylene-grafted multi-walled carbon nanotube reinforced polypropylene composite bipolar plates in polymer electrolyte membrane fuel cells", Energy & Environmental Science, 4: 543-550, 2011. (5-year IF: 19.20)