



1. Phone/E-mail : 886-6-2533131 ext.3729 / hckuan@stust.edu.tw

2. Academic degrees:

1994~1998	Bachelor's Degree of Chemical Engineering National Tsing-Hua University, Taiwan Mentor: Professor Chen-Chi M. Ma.
1998~2000	Master's Degree of Chemical Engineering National Tsing-Hua University, Taiwan Advisor: Professor Chen-Chi M. Ma.
2000 ~2005	Ph.D Degree of Chemical Engineering, National Tsing-Hua University, Taiwan Advisor: Professor Chen-Chi M. Ma.
2007~2011	Assist Professor of Far East University
2011~2022/07	Associate Professor of Far East University
2013/03~2016/02	Director of Industrial Academic Cooperation Office, Far East University
2016~now	Adjunct Associate Professor of University of South Australia
2018~2022/07	Dean of Research and Development, Far East University
2022/08~	Associate Professor of Southern Taiwan University of Science and Technology

3. Major research publications of international journals :

Having PhD in 2005,I have had **an H-index of 42** (Google Scholar), and **an m-index of 3.0**, surpassing well the world standard $m\text{-index} \approx 2$ to be qualified as an outstanding scientist ($m\text{-index} \approx 1$ refers to a successful scientist, metrics detailed at PNAS, 2005, 102, 16569)

- (1) Shen-Han Wu, Feng-Yih Wang, Chen-Chi M. Ma ,Wen-Chi Chang, Chun-Ting Kuo, Hsu-Chiang Kuan, Wen-June Chen, " Mechanical, thermal and morphological properties of glass fiber and carbon fiber reinforced polyamide-6 and polyamide-6/clay nanocomposites", *Materials Letters* 49 (6), 327-333 (Jul 2001) (**IF=3.423**)
- (2) Hsu-Chiang Kuan , Jaine-Ming Huang , Chen-Chi M. Ma and Feng-Yih Wang," Processability, Morphology and Mechanical Properties of Wood Fiber High-Density Polyethylene Composites", *Plastics , Rubber and Composites*, v32, n3, p122-126 (2003) (**IF=2.021**)
- (3) Chin-Lung Chiang, Chen-Chi M.Ma, Dai-Lin Wu and Hsu-Chiang Kuan, "Preparation, Characterization and Properties of Novolac Type Phenolic/SiO₂ Hybrid Organic/Inorganic Nano-Composite Materials by Sol-Gel Method", *Journal of Polymer Science Part A : Polymer Chemistry*, Vol 41, 7, p905-913 (Apr 2003) (**IF=2.702**)

- (4) Chin-Lung Chiang, Chen-Chi M. Ma, Feng-Yih Wang and Hsu-Chiang Kuan , "Thermo-oxidative degradation of novel epoxy containing silicon and phosphorous nanocomposites" , *European Polymer Journal* , vol.39 , p.825-830(Apr 2003) (**IF=4.598**)
- (5) Chen-Chi M. Ma, Chung-Ting Hsieh , Hsu-Chiang Kuan, Tsao-Yang Tsai and Shih-Wen Yu," Effects of Molecular Weight and Molecular Structure of Low Profile Additives on the Properties of Bulk Molding Compound (BMC)" , *Polymer Engineering and Science*, v43, n5, p989-998 (May 2003) (**IF=2.428**)
- (6) Chen Chi M. Ma, Chun-Ting Kuo, Hsu-Chiang Kuan and Wen-Chi Chang, "Effects of Swelling Agents on the Crystallization behavior and mechanical properties of Polyamide 6/Clay Nanocomposite ", *Journal of Applied Polymer Science* , v 88,n 7,2003,p 1686-1693 (May 2003) (**IF=3.125**)
- (7) Chen-Chi M. Ma, Hsu-Chiang Kuan, Jen-Chieh Hsieh and Chin-Lung Chiang, "Effects of Chain extender and hard/soft segment content on the Surface and Electrical Properties of PDMS based Polyurea-urethane" *Journal of Materials Science* ,vol 38, P3933-3944 (Oct 2003) (**IF=4.22**)
- (8) Chen-Chi M. Ma, Chih-Yuan Chen, Hsu-Chiang Kuan and Wen-Chi Chang, " Processability , Thermal , Mechanical and Morphological Properties of Novolac Type Epoxy Resin based Carbon/Carbon Composite" , *Journal of Composite Materials*, Vol 38, 4, p311-320 (2004) (**IF=2.591**)
- (9) Hsu-Chiang Kuan, Chen-Chi M. Ma, Ke-Hong Chen and Shih-Ming Chen , " Preparation, Electrical, Mechanical and Thermal Properties of Composite Bipolar Plate for Fuel Cell", *Journal of Power Sources*, vol. 134, No.1, P7-17(July 2004) (**IF=9.127**)
- (10) Hsu-Chiang Kuan, Chen-Chi M. Ma, Wen-Ping Chuang ,and Hsun-Yu Su, " Hydrogen bonding, mechanical and physical property, and surface morphology of waterborne polyurethane / clay nanocomposite" , *Journal of Polymer Science Part B : Polymer Physics* 43(1), P1-12(Jan 2005) (**IF=2.489**)
- (11) Hsu-Chiang Kuan, Wen-Ping Chuang , Chen-Chi M. Ma · Chin-Lung Chiang and Han-Lang Wu , " Synthesis and Characterization of Clay / Waterborne Polyurethane Nanocomposite" , *Journal of Materials Science*,vol.40(1), P179-185(Jan 2005) (**IF=4.22**)
- (12) Chen-Chi M. Ma, Hsun-Yu Su, Hsu-Chiang Kuan, Chen-Feng Kuan and Chin-Lung Chiang, "Hydrogen bonding, crystallinity, and morphological properties of polysilicic acid / waterborne polyurethane nanocomposite", *Journal of Polymer Science, Part B: Polymer Physics* , 43(9), P1076-1089 (Feb 2005) (**IF=2.489**)
- (13) Chen-Chi M. Ma, Yuan-Li Huang, Hsu-Chiang Kuan and Yie-Shun Chiu, "Preparation and electromagnetic interference shielding characteristics of novel carbon nanotube / siloxane / poly(urea-urethane) nanocomposite", *Journal of Polymer Science, Part B: Polymer Physics* , 43(4), P345-358 (Feb 2005) (**IF=2.489**)
- (14) Jun Ma, Zhong-Zhen Yu, Hsu-Chiang Kuan and Yiu-Wing Mai,"A New Strategy to Exfoliated Silicone Rubber / Clay Nanocomposites", *Macromolecular Rapid Communications* 26(10) P.830-833 (May 2005) (**SCI=5.734**)

- (15) Hsu-Chiang Kuan , Jenn-Fong Kuan, Chen-Chi M. Ma and Jaine-Ming Huang," Thermal and Mechanical Properties of silane-grafted water-crosslinked polyethylene", *Journal of Applied Polymer Science*,96(6), P2383-2391(Jun 2005) **(IF=3.125)**
- (16) Hsu-Chiang Kuan, Chen-Chi M. Ma, Wei-Ping Chang, Siu-Ming Yuen, Hsin-Ho Wu and Tzong-Ming Lee, "Synthesis, Thermal, Mechanical and Rheological Properties of Multiwall Carbon Nanotube / Waterborne Polyurethane Nanocomposite" ,*Composites Science and Technology*, 65 P1703~1710 (Sep 2005) **(IF=8.528)**
- (17) Han-Lang Wu, Yu-Ting Yang, Chen-Chi M. Ma and Hsu-Chiang Kuan, "Molecular Mobility of Free Radical Functionalized Carbon-Nanotube/Siloxane/Poly(urea-urethane) Nanocomposites", *Journal of Polymer Science Part A: Polymer Chemistry*, 43(23), 6084-6094 (Dec 2005). **(IF=2.702)**
- (18) Hsu-Chiang Kuan, Hsun-Yu Su and Chen-Chi M. Ma , "Synthesis and Characterization of Polysilicic Acid Nanoparticles / Waterborne Polyurethane Nanocomposites" , *Journal of Materials science*, 40(23), 6063-6070 (Dec 2005). **(IF=4.22)**
- (19) Chen-Chi M. Ma , Yi-Jie Chen and Hsu-Chiang Kuan," Polystyrene Nanocomposite Materials: Preparation, Morphology, Mechanical, Electrical and Thermal Properties" , *Journal of applied Polymer Science* 98(5), 2266-2273 (Dec 2005) **(IF=3.125)**
- (20) Hsu-Chiang Kuan, Chien-Shun Wu , Chih-Yuan Chen, Zhong-Zhen Yu, Aravind Dasari and Yiu-Wing Mai, "Exfoliated zirconium phosphate / Nafion organic-inorganic hybrid proton exchange membranes", *Electrochemical and solid state letters* 9 (2) A76-A79 (2006) **(IF=2.321)**
- (21) Chen-Feng Kuan , Hsu-Chiang Kuan , Chen-Chi M. Ma and Jaine-Ming Huang, "Mechanical - Morphology and Thermal Properties of Water-crosslinked Wood Flour Reinforced Linear Low-Density Polyethylene Composites", *Composites Part A: Applied Science and Manufacturing* 37(10), 1696-1707(2006) **(IF=7.664)**
- (22) Chen-Feng Kuan,Hsu-Chiang Kuan, Chih-Yuan Chen and Chen-Chi M. Ma.," Study on the Polydimethylsiloxane Polyurethane Modified Novolac Type Epoxy Precursor for Manufacturing Carbon / Carbon Composites", *Journal of Composite Materials* 40(8), 717-731 (2006) **(IF=2.591)**
- (23) Han-Lang Wu, Chen-Chi M. Ma, Hsu-Chiang Kuan, Chung-Hao Wang, Chih-Yuan Chen, Chin-Lung Chiang, "Sulfonated poly(ether ether ketone)/poly(vinylpyrrolidone) acid-base polymer blends for direct methanol fuel cell application", *Journal of Polymer Science, Part B: Polymer Physics* , 44(3), 565-572 (Apr 2006) **(IF=2.489)**
- (24) Han-Lang Wu, Yu-Ting Yang, Chen-Chi M. Ma , Hsu-Chiang Kuan, Cheng-Chien Yang and Chin-Lung Chiang "Morphology, electrical resistance, electromagnetic interference shielding and mechanical properties of functionalized MWNT and poly(urea urethane) nanocomposites", *Journal of Polymer Science, Part B: Polymer Physics* 44(7), 1096-1105 (Apr 2006). **(IF=2.489)**
- (25) Chen-Chi M. Ma , Yi-Jie Chen and Hsu-Chiang Kuan," Polystyrene nanocomposite materials - Preparation, mechanical, electrical and thermal properties, and morphology" , *Journal of*

applied Polymer Science 100(1), 508-515 (Apr 2006) (IF=3.125)

- (26) Chen-Feng Kuan, Chen-Chi M. Ma, Hsu-Chiang Kuan, Han-Lang Wu, Yu-Mei Liao" Preparation and Characterization on the Novel Water-crosslinked Cellulose Reinforced Poly(butylene succinate) Composites", *Composite Science and Technology* 66(13), 2231-2241(Oct 2006) (IF=8.528)
- (27) Chen-Feng Kuan, Hsu-Chiang Kuan, Chen-Chi M. Ma* and Chen, Chia-Hsun, "Flame retardancy and nondripping properties of ammonium polyphosphate/poly(butylene succinate) composites enhanced by water crosslinking", *Journal of applied Polymer Science* 102(3), 2935-2945(Nov 2006) (IF=3.125)
- (28) Chia-Hsun Chen, Shun-Tian Lin, Kun-Chang Lin, Chen-Feng Kuan and Hsu-Chiang Kuan*, "Effect of Powder Surface Charge on the Rheological behaviors of Powder-Polymer Blends", *Journal of Polymer Engineering* 27(8), 597-606(2007) (IF=1.367)
- (29) Siu-Ming Yuen, Chen-Chi M. Ma, Hsin-Ho Wu, Hsu-Chiang Kuan, Wei-Jen Chen, Shu-Hang Liao, Chia-Wen Hsu, Han-Lang Wu," "Preparation and Thermal, Electrical, and Morphological Properties of Multiwalled Carbon Nanotube and Epoxy Composites", *Journal of Applied Polymer Science*, Vol. 103, 1272–1278 (Jan 2007) (IF=3.125)
- (30) Chen-Feng Kuan, Hsu-Chiang Kuan, Chen-Chi M. Ma , Chia-Hsun Chen , Han-Lang Wu, "The Preparation of Carbon Nanotube / Linear Low Density Polyethylene Nanocomposite via Water-crosslinking Reaction", *Materials Letters* 61 (13), 2744-2748 (May 2007) (IF=3.423)
- (31) Siu-Ming Yuen 、 Chen-Chi M. Ma 、 Yao-Yu Lin and Hsu-Chiang Kuan*, " Preparation, Morphology and Properties of acid and amine modified Multiwalled Carbon Nanotube / Polyimide Composite", *Composites Science and Technology* 67, 2564-2573(Sep 2007) (IF=8.528)
- (32) Siu-Ming Yuen, Chen-Chi M. Ma, Chih-Chun Teng, Hsin-Ho Wu, Hsu-Chiang Kuan, Chin-Lung Chiang," Molecular Motion, Morphology, and Thermal Properties of Multiwall Carbon Nanotube/Polysilsesquioxane Composite", *Journal of Polymer Science Part B- Polymer Physics*, Vol. 46, 472 – 482 (Mar 2008) (IF=2.489)
- (33) Chen-Feng Kuan, Hsu-Chiang Kuan ,Chen-Chi M. Ma and Chia-Hsun Chen, "Mechanical and Electrical Properties of Multi-Wall Carbon Nanotube / Poly (lactic acid) Composites", *Journal of Physics and Chemistry of Solids* ,69,P1395-1398 (May 2008) (IF=3.995)
- (34) Chen-Feng Kuan, Chia-Hsun Chen, Hsu-Chiang Kuan, Kun-Chang Lin and Chin-Lung Chiang., " Multi-walled Carbon Nanotube Reinforced Poly (L-lactic acid) Nanocomposites Enhanced by Water-crosslinking Reaction", *Journal of Physics and Chemistry of Solids* ,69,P1399-1402 (May 2008) (IF=3.995)
- (35) Chen-Feng Kuan , Wei-Hsin Yen , Chia-Hsun Chen , Siu-Ming Yuen , Hsu-Chiang Kuan , Chin-Lung Chiang , " Synthesis, characterization, flame retardance and thermal properties of halogen-free expandable graphite/PMMA composites prepared from sol-gel method", *Polymer Degradation and Stability* 93(7), 1357-1363 (2008) (July IF=5.03)
- (36) Jun Ma, Mao-Song Mo, Xu-Sheng Du, Patrick Rosso, Klaus Friedrich and Hsu-Chiang Kuan*, "Effect of inorganic nanoparticles on mechanical property, fracture toughness and

- toughening mechanism of two epoxy systems”, *Polymer* 49(16) P3510-3523 (July 2008) **(IF=4.43)**
- (37) Chen-Feng Kuan, **Hsu-Chiang Kuan**, Chen-Chi M. Ma, Chia-Hsun Chen, Kun-Chang Lin and Hsin-Chin Peng, ”Recycled PCB flour reinforced linear low-density polyethylene composites enhanced by watercross-linking reaction”, *Asia-Pacific Journal of Chemical Engineering* 4(2) , P169–177(Mar 2009) **(IF=1.447)**
- (38) Jia-Bin Dai, **Hsu-Chiang Kuan**, Xu-Shen Du, Shao-Cong Daid and Jun Ma, ”Development of a novel toughener for epoxy resins”, *Polymer International*, 58(7), P838–845(Jul 2009) **(IF=2.99)**
- (39) **Hsu-Chiang Kuan**, Shao-Lung Chiu , Chia-Hsun Chen, Chen-Feng Kuan, and Chin-Lung Chiang, “Synthesis, Characterization and Thermal Stability of PMMA/SiO₂/TiO₂ Tertiary Nanocomposites via Non-Hydrolytic Sol-Gel Method”, *Journal of Applied Polymer Science*, 133(3),P1959-1965 (Aug 2009) **(IF=3.125)**
- (40) Chia-Hsun Chen, Wei-Hsin Yen, **Hsu-Chiang Kuan**, Chen-Feng Kuan, and Chin-Lung Chiang, “Preparation, Characterization and Thermal Stability of Novel PMMA/ Expandable Graphite Halogen-Free Flame Retardant Composites”, *Polymer Composites*, 31(1),P18-24 (Jan 2010) **(IF=3.171)**
- (41) **Hsu-Chiang Kuan**, Jia-Bin Dai, Jun Ma, ”A Reactive Polymer for Toughening Epoxy Resin”, *Journal of Applied Polymer Science*, 115(6),P 3265 – 3272 (Mar 2010) **(IF=3.125)**
- (42) Wei-Jen Chen, Yi-Luen Li, Chin-Lung Chiang, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Tzu-Ting Lin, Ming-Chuen Yip, ”Preparation and Characterization of Carbon Nanotubes / Epoxy Resin Nano-Prepreg for Nanocomposites”, *Journal of Physics and Chemistry of Solids* , 71(4),P431-435 (Apr 2010) **(IF=3.995)**
- (43) Chen-Feng Kuan, Wei-Jen Chen , Yi-Luen Li , Chia-Hsun Chen , **Hsu-Chiang Kuan** , Chin-Lung Chiang, ”Flame Retardance and Thermal Stability of Carbon Nanotube Epoxy Composite Prepared from Sol-Gel Method”, *Journal of Physics and Chemistry of Solids* , 71(4),P539-543 (Apr 2010) **(IF=3.995)**
- (44) Chen-Feng Kuan , Shu-Wei Hsu , Wei-Jen Chen, Yi-Luen Li ,Chia-Hsun Chen, **Hsu-Chiang Kuan** and Chin- Lung Chiang,”Preparation, Characterization and Thermal Properties of Green Polypropylene /Intumenscent Flame Retardant Composites”, *Advanced Materials Research* Vols. 123-125, P 1259-1262 (2010) **(EI)**
- (45) Quyen Huyen Le, **Hsu-Chiang Kuan**, Jia-Bin Dai, Izzuddin Zaman, Lee Luong, Jun Ma,” Structure-property relations of 55 nm particle-toughened epoxy”, *Polymer* 51(21) P4867-4879 (Oct 2010) **(IF=4.43)**
- (46) Izzuddin Zaman, Quyen-Huyen Le, **Hsu-Chiang Kuan**, Nobuyuki Kawashima, Lee Luong, Andrea Gerson, Jun Ma, “Interface-tuned epoxy/clay nanocomposites”, *Polymer*, 52(2) P497-504 (Jan 2011) **(IF=4.43)**
- (47) Izzuddin Zaman , Tam Thanh Phan , **Hsu-Chiang Kuan** , Qingshi Meng , Ly Truc Bao La , Lee Luong ,Osama Youssf , Jun Ma,” Epoxy/graphene platelets nanocomposites with two levels of interface strength”, *Polymer* 52(7) P1603-1611 (Mar 2011) **(IF=4.43)**

- (48) Hsin-Chih Peng, Chen-Feng Kuan, Chia-Hsun Chen, Kun-Chang Lin and Hsu-Chiang Kuan*," Study on the Preparation and Properties of Multiwall Carbon Nanotube Reinforced Biodegradable Polymer Blend" , *Advanced Materials Research* 239-242, P145-149 (May 2011) (EI)
- (49) Jun Ma, Ly Truc Bao La, Izzuddin Zaman, Lee Luong, Denise Ogilvie, Hsu-Chiang Kuan*," Fabrication, structure and properties of epoxy/metal nanocomposites", *Macromolecular Materials and Engineering* 269(5) P465-474 (May 2011) (IF=4.367 , Cover Art)
- (50) Kuang-Chung Tsai, Hsu-Chiang Kuan, Huang-Wen Chou, Chen-Feng Kuan, Chia-Hsun Chen and Chin-Lung Chiang, "Preparation of Expandable Graphite using Hydrothermal Method and Flame Retardant Properties of Its Halogen-free Flame Retardant HDPE Composites", *Journal of Polymer Research* 18(4),P483-488(July 2011) (IF=3.097)
- (51) Yuan-Li Huang, Chen-Chi M. Ma*, Siu-Ming Yuen, Chia-Yi Chuang, Hsu-Chiang Kuan, Chin-Lung Chiang, Sheng-Yen Wu, "Effect of maleic anhydride modified MWCNTs on the morphology and dynamic mechanical properties of its PMMA composites", *Materials Chemistry and Physics* 129(3), P1214 - 1220 (Oct 2011) (IF=4.094)
- (52) Izzuddin Zaman, Hsu-Chiang Kuan, Nobuyuki Kawashima, Andrew Michelmore, Fen Li, Jingfei Dai, Alex Sovi, Songyi Dong, Lee Luong, Jun Ma*,"From carbon nanotubes and silicate layers to graphene platelets for polymer nanocomposites" ,*Nanoscale* 4 (15), P4578 - 4586 (May 2012) (IF=7.79)
- (53) Tsung-Chi Wu, Kuang-Chung Tsai, Mu-Chen Lu, Hsu-Chiang Kuan, Chia-Hsun Chen, Chen-Feng Kuan, Shao-Lung Chiu, Shu-Wei Hsu and Chin-lung Chiang*," Synthesis, Characterization and Properties of Silane-Functionalized Expandable Graphite Composites", *Journal of Composite Materials* 46(2),P1483-1496 (June 2012) (IF=2.591)
- (54) Chen-Feng Kuan, Kuang-Chung Tsai, Chia-Hsun Chen, Hsu-Chiang Kuan, Tai-Ying Liu, Chin-Lung Chiang*,"Preparation of expandable graphite via H₂O₂-hydrothermal process and its effect on properties of high-density polyethylene composites", *Polymer Composites* 33(6),P872-880(June 2012) (IF=3.171)
- (55) Yi-Luen Li , Chen-Feng Kuan , Chia-Hsun Chen , Hsu-Chiang Kuan , Ming-Chuen Yip, Shao-Lung Chiu, Chin-Lung Chiang* , "Preparation, thermal stability and electrical properties of PMMA/functionalized graphene oxide nanosheets composites", *Materials Chemistry and Physics* 134(2-3), P677-685(June 2012) (IF=4.094)
- (56) Izzuddin Zaman, Hsu-Chiang Kuan, Qingshi Meng, Andrew Michelmore, Nobuyuki Kawashima, Terry Pitt, Liqun Zhang, Sherif Gouda, Lee Luong, Jun Ma*, "A Facile Approach to Chemically Modified Graphene and its Polymer Nanocomposites", *Advanced Functional Materials* 22(13), P2735-2743 (July 2012) (IF=18.808)
- (57) Yi-Luen Li, Chen-Feng Kuan, Shu-Wei Hsu, Chia-Hsun Chen, Hsu-Chiang Kuan, Fang-Mei Lee, Ming-Chuen Yip and Chin-Lung Chiang*,"Preparation, thermal stability and flame retardant properties of halogen-free polypropylene composites", *High Performance Polymers* 24(6),P478-487 (Sep 2012) (IF=2.161)
- (58) Ming-Yuan Shen, Chen-Feng Kuan, Hsu-Chiang Kuan, Chia-Hsun Chen,Jia-Hong Wang,

- Ming-Chuen Yip and Chin-Lung Chiang*, "Preparation, Characterization, Thermal and Flame Retardant Properties of Green Silicon-Containing Epoxy / Functionalized Graphene Nanosheets Composites", *Journal of Nanomaterials*, Article ID 747963, 10 pages (Mar 2013) (**IF=2.986**)
- (59) Jun Ma, Qingshi Meng, Andrew Michelmore,Nobuyuki Kawashima, Zaman Izzuddin, Carl Bengtsson, and **Hsu-Chiang Kuan***, "Covalently bonded interfaces for polymer/graphene composites", *Journal of Materials Chemistry A* 1(13) P4255–4264 (Jan 2013) (**IF=12.732**)
- (60) Kuang-Chung Tsai, Chen-Feng Kuan, Chia-Hsun Chen, **Hsu-Chiang Kuan**, Shu-Wei Hsu , Fang-Mei Lee and Chin-Lung Chiang*, " Study on thermal degradation and flame retardant property of halogen-free polypropylene composites using XPS and cone calorimeter" , *Journal of Applied Polymer Science* 127(2),P1084-1091(Jan 2013) (**IF=3.125**)
- (61) Sherif Araby, Izzuddin Zaman, Qingshi Meng, Nobuyuki Kawashima, Andrew Michelmore, **Hsu-Chiang Kuan**, Peter Majewski, Liqun Zhang*, Jun Ma*, "Melt compounding with graphene to develop functional, high-performance elastomers", *Nanotechnology* 24(16) 165601(14pp) (Apr 2013) (**IF=3.874**)
- (62) Sherif Araby, Liqun Zhang, **Hsu-Chiang Kuan**, Jia-Bin Dai, Peter Majewski, Jun Ma*, " A novel approach to electrically and thermally conductive elastomers using graphene", *Polymer* 54 (14),P3663-3670 (June 2013) (**IF=4.43**)
- (63) Jun Ma, Qingshi Meng , Izzuddin Zaman , Shenmin Zhu , Andrew Michelmore ,Nobuyuki Kawashima , Chun H. Wang and **Hsu-Chiang Kuan***, "Development of polymer composites using modified, high-structural integrity graphene platelets", *Composites Science and Technology* 91 ,P82-90(Jan 2014) (**IF=8.528**)
- (64) Ming-Yuan Shen, Kuo-Yi Li, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Chia-Hsun Chen, Ming-Chuen Yip, Huang-Wen Chou, Chin-Lung Chiang*, " Preparation of expandable graphite via ozone-hydrothermal process and flame-retardant properties of high-density polyethylene composites", *High Performance Polymers* 26(1),P34-42 (Feb 2014) (**IF=2.161**)
- (65) Qingshi Meng, Sherif Araby, Nasser Saber, **Hsu-Chiang Kuan**, Jiabin Dai, Lee Luong, Jun Ma*, Chun H Wang*, " Toughening polymer adhesives using nano-sized elastomeric particles", *Journal of Materials Research* 29(5) P665-674(Mar 2014) (**IF=3.089**)
- (66) Qingshi Meng, Jian Jin, Ruoyu Wang, **Hsu-Chiang Kuan**, Jun Ma*,Nobuyuki Kawashima, Andrew Michelmore, Shenmin Zhu and Chun H Wang*, " Processable 3-nm thick graphene plateletsof high electrical conductivity and their epoxy composites", *Nanotechnology* 25(12) 125707(12pp)(Mar 2014) (**IF=3.874**)
- (67) Kuo-Yi Li, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Chia-Hsun Chen, Ming-Yuan Shen, Jia-Ming Yang, Chin-Lung Chiang*, "Preparation and properties of novel epoxy/graphene nanosheets oxide (GNO) composites functionalized with flame retardant containing phosphorus and silicon", *Materials Chemistry and Physics* 146(3),P354-362(Aug 2014) (**IF=4.094**)
- (68) Qingshi Meng, Chun H. Wang, Nasser Saber, **Hsu-Chiang Kuan**, Jiabin Dai, Klaus Friedrich, Jun Ma*, "Nanosilica-toughened polymer adhesives", *Materials and Design* 61C, pp. 75-86 (Sep 2014) (**IF=7.991**)
- (69) Qingshi Meng, **Hsu-Chiang Kuan**, Sherif Araby, Nobuyuki Kawashima, Nasser Saber, Chun

- H. Wang, Jun Ma*," Effect of interface modification on PMMA/graphene nanocomposites", *Journal of Materials Science* 49(17),P5838-5849(Sep 2014) (**IF=4.22**)
- (70) Kuo-Yi Li, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Chia-Hsun Chen, Tai-Ying Liu, Chin-Lung Chiang*, "Preparation, characterization, and flame retardance of high-density polyethylene/sulfur-free expandable graphite composites", *High Performance Polymers* 26(7), P798–809 (Nov 2014) (**IF=2.161**)
- (71) Nasser Saber, Qingshi Meng, Hung-Yao Hsu, Sang-Heon Lee, **Hsu-Chiang Kuan**, Donavan Marney, Nobuyuki Kawashima, Jun Ma*," Smart thin-film piezoelectric composite sensors based on high lead zirconate titanate content", *Structural Health Monitoring* 14(3) P214-227(May 2015) (**IF=5.929**)
- (72) Ge Shi, Qingshi Meng, Zhiheng Zhao, **Hsu-Chiang Kuan**, Andrew Michelmore, Jun Ma*," Facile Fabrication of Graphene Membranes with Readily Tunable Structures", *ACS Applied Materials & Interfaces* 7 (25) P13745-13757 (July 2015) (**IF=9.229**)
- (73) Zhiheng Zhao, Georgia Richardson, Qingshi Meng, Shenmin Zhu, **Hsu-Chiang Kuan**, Jun Ma*, "PEDOT-based Composites as Electrode Materials for Supercapacitors", *Nanotechnology* 27(4), 042001, (*Topical Review*) (Jan 2016) (**IF=3.874**)
- (74) Ming-Yuan Shen , Wei-Jen Chen , Chen-Feng Kuan, **Hsu-Chiang Kuan**, Jia-Ming Yang , Chin-Lung Chiang*, "Preparation, characterization of microencapsulated ammonium polyphosphate and its flame retardancy in polyurethane composites", *Materials Chemistry and Physics* 173, P205-212 (April 2016) (**IF=4.094**)
- (75) Ashraful Alam, Qingshi Meng, Ge Shi, Sherif Arabi, Jun Ma*, Ning Zhao, **Hsu-Chiang Kuan***, , "Electrically Conductive, Mechanically Robust, pH-Sensitive Graphene/Polymer Composite Hydrogels", *Composites Science and Technology* 127, P119-126 (April 2016) (**IF=8.528**)
- (76) Ashraful Alam, **Hsu-Chiang Kuan**, Zhiheng Zhao, Jian Xu, Jun Ma*, "Novel Polyacrylamide Composite Hydrogels by Highly Conductive, Water-Processable Graphene", *Composites Part A* 93 P1–9 (Feb 2017) (**IF=7.664**)
- (77) Shang-Hao Liu , Chen-Feng Kuan, **Hsu-Chiang Kuan**, Ming-Yuan Shen, Jia-Ming Yang and Chin-Lung Chiang, "Preparation and Flame Retardance of Polyurethane Composites Containing Microencapsulated Melamine Polyphosphate", *Polymers*, 9(9), 407 (Sep 2017) (**IF=4.329**)
- (78) Ming-Yuan Shen, Wei-Jen Chen, Kuang-Chung Tsai, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Huang-Wen Chou and Chin-Lung Chiang, "Preparation of Expandable Graphite and Its Flame Retardant Properties in HDPE Composites", *Polymer Composites*,38(11) ,P2378-2386 (Nov 2017) (**IF=3.171**)
- (79) Ashraful Alam, Yongjun Zhang, **Hsu-Chiang Kuan**, Sang-Heon Lee and Jun Ma, "Polymer composite hydrogels containing carbon nanomaterials-Morphology and mechanical and functional performance", *Progress in Polymer Science*,77,P1-18 (Feb 2018) (**IF=29.19**)

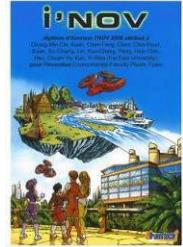
- (80) Sherif Araby, Chun-Hui Wang, Hao Wu, Qingshi Meng, **Hsu-Chiang Kuan**, Nam Kyun Kim, Adrian Mouritz, Jun Ma*, "Development of flame-retarding elastomeric composites with high mechanical performance", *Composites Part A* 109 P257 – 266 (Jun 2018) (**IF=7.664**)
- (81) Hao Wu, Sherif Araby, Jian Xu, Qingshi Meng, **Hsu-Chiang Kuan**, Chun-Hui Wang, Adrian Mouritz, Yan Zhuge, Richard J-T Lin, Jun Ma, "Filling natural microtubules with triphenyl phosphate for flame-retarding polymer composites", *Composites Part A* 115 P247 – 254 (Dec 2018) (**IF=7.664**)
- (82) Shang-Hao Liu, Ming-Yuan Shen, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Cing-Yu Ke, Chin-lung Chiang*, "Improving Thermal Stability of Polyurethane through the Addition of Hyperbranched Polysiloxane", *Polymers*, 11(4), 697(Apr 2019) (**IF=4.329**)
- (83) Sherif Araby, Xiao Su, Qingshi Meng, **Hsu-Chiang Kuan**, Chun-Hui Wang, Adrian Mouritz, Ahmed Maged, Jun Ma *, "Graphene platelets versus phosphorus compounds for elastomeric composites: flame retardancy, mechanical performance and mechanisms", *Nanotechnology* 30(38) 385703(14pp)(July 2019) (**IF=3.874**)
- (84) Chen-Feng Kuan, Chin-Lung Chiang, Ming-Yuan Shen, **Hsu-Chiang Kuan***, "The Study on Coffee Biomass Composites Materials and Its Application on Green Golf Grip", *Modern Physics Letter B*, 34, 07n09,2040009 (Mar 2020) (**IF=1.668**)
- (85) **Hsu-Chiang Kuan**, Chin-Lung Chiang, Ming-Yuan Shen, Chen-Feng Kuan*, "The study on coffee slag/recycled polystyrene circulation materials and its application on blinds", *Modern Physics Letter B*, 34,07n09,2040010 (Mar 2020) (**IF=1.668**)
- (86) Ming-Yuan Shen, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Jia-Ming Yang, Chin- Lung Chiang*, Smoke Suppression Performance of Polyurethane Composites containing Microencapsulated Melamine Polyphosphate, *Modern Physics Letters B*, 34,07n09,2040012. (Mar 2020) (**IF=1.668**)
- (87) Ruoyu Wang, **Hsu-Chiang Kuan**, Aidong Qiu, Xiao Su, Jun Ma,*,"A Facile Approach to the Scalable Preparation of Thermoplastic / Carbon Nanotube Composites" , *Nanotechnology* 31(19) 195706 (May 2020) (**IF=3.874**)
- (88) Mohannad Naeem, **Hsu-Chiang Kuan**, Andrew Michelmore, Qingshi Meng, Aidong Qiu, Mathias Aakyiir, Dusan Losic, Shenmin Zhu and Jun Ma*, "A new method for preparation of functionalized graphene and its epoxy nanocomposites" *Composites Part B-Engineering* 196, 108096 (Sep 2020) (**IF=9.078**)
- (89) Ming-Yuan Shen, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Cing-Yu Ke; Chin-Lung Chiang*, "Study on preparation and properties of agricultural waste bagasse eco-type bio-flame retardant/epoxy composites", *Journal of Thermal Analysis and Calorimetry*, DOI 10.1007/s10973-020-10368-9 (Nov 2020) (**IF=4.626**)
- (90) Ming-Yuan Shen, Chen-Feng Kuan, **Hsu-Chiang Kuan**, Cing-Yu Ke, Chin- Lung Chiang**" Flame Retardance and Char Analysis of Environmental Friendly Polyurethane Hyperbranched Organic-Inorganic Hybrid Using the Sol-Gel Method", *Sustainability* 13(2), 486 (Jan 2021) (**IF=3.251**) (Jan 2021)
- (91) Mohannad Naeem, **Hsu-Chiang Kuan**, Andrew Michelmore, Siron Yu, Jun Ma*, "Epoxy/graphene Nanocomposites Prepared by In-situ Microwaving" *Carbon* 117,271-281

(IF=9.594) (Jun 2021)

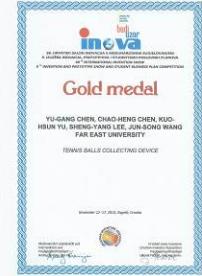
- (92) Xiao Su, Ruoyu Wang, Xiaofeng Li, Sherif Araby, **Hsu-Chiang Kuan**, Mohannad Naeem, Jun Ma*, "A Comparative Study of Polymer Nanocomposites Containing Multi-Walled Carbon Nanotubes and Graphene Nanoplatelets", *Nano Materials Science* (In press)

4. Major awards of international invention exhibitions

Year	Invention Exhibitions	Awards	Photos
2007	Geneva Invention Exhibition(Switzerland)	Gold Prize & Special Honor	
2007	Pittsburgh Invention Exhibition(USA)	Silver Medal Bronze Medal (x2) Gold Medal(award of merit)	
2007	London Invention Exhibition(England)	Gold Prize	
2007	Nuremberg Invention Exhibition(Germany)	Gold Prize	

2008	Moscow Invention Exhibition(Russia)	Gold Prize	 
2008	Geneva Invention Exhibition(Switzerland)	Boron Prize	 
2008	French Invention Exhibition(France)	Silver Prize	 
2008	Nuremberg Invention Exhibition(Germany)	Silver Prize	 
2008	Seoul Invention Exhibition(Korea)	Silver Prize	 
2008	Taipei Invention Exhibition(Taiwan)	Boron Prize	 

2009	Geneva Invention Exhibition(Switzerland)	Gold Prize & Special Honor	 
2009	Nuremberg Invention Exhibition(Germany)	Gold Prize & Special Honor	 
2010	Geneva Invention Exhibition(Switzerland)	Silver Prize	 
2010	Taipei Invention Exhibition(Taiwan)	Gold Prize Boron Prize	 
2010	Nuremberg Invention Exhibition(Germany)	Gold Prize	 
2011	Geneva Invention Exhibition(Switzerland)	Gold Prize & Special Honor	 

2011	Taipei Invention Exhibition(Taiwan)	Boron Prize		
2011	INOVA Invention Exhibition(Croatia)	Silver Prize		
2012	Pittsburgh Invention Exhibition(USA)	Gold Medal Silver Medal		
2013	ITEX Invention Exhibition(Malaysia)	Gold Medal x2		
2013	Nuremberg Invention Exhibition(Germany)	Silver Prize		
2013	INOVA Invention Exhibition(Croatia)	Gold Prize		

2013	Seoul Invention Exhibition(Korea)	Boron Prize	 
2014	Seoul Invention Exhibition(Korea)	Boron Prize	 
2015	Geneva Invention Exhibition(Switzerland)	Gold Prize	 
2015	Nuremberg Invention Exhibition(Germany)	Boron Prize x2 Special Honor	   
2017	Geneva Invention Exhibition(Switzerland)	Gold Prize	 

2017	ITEX Invention Exhibition(Malaysia)	Gold Prize	
2017	Taipei Invention Exhibition(Taiwan)	Boron Prize x2	
2017	Seoul Invention Exhibition(Korea)	Gold Prize	
2018	Taiwan Innotech Expo	Gold Prize x2	
			

2018	Seoul Invention Exhibition(Korea)	Gold Prize	
2018	Kaohsiung International Invention & Design EXPO (Taiwan)	Silver Prize	
2019	Bangkok International IP Invention Innovation Exposition(Tailand)	Boron Prize	
2019	ITEX Invention Exhibition(Malaysia)	Boron Prize	
2019	Kaohsiung International Invention & Design EXPO (Taiwan)	Silver Prize	

2020	Seoul Invention Exhibition(Korea)	Boron Prize	
2021	Kaohsiung International Invention & Design EXPO (Taiwan)	Silver Prize	

5. International Judge & Awards of Invention Exhibition

2013	ITEX Invention Exhibition(Malaysia)	
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2013	INOVA Invention Exhibition(Croatia)	 
2015	Kaohsiung International Invention & Design EXPO (Taiwan)	

6. Major Patents

類別	專利名稱	國別	專利號碼	發明人	專利權人	專利核准日期
A	燃料電池的複合材料雙極板之製備方法	中華民國	I221039	馬振基、陳科宏、 <u>關旭強</u> 、陳世明、蔡銘晃、顏貽乙、曹芳海	國立清華大學、工業技術研究院	2004.09.01-2023.07.01
A	Preparation of fuel cell composite bipolar plate	美國	US20050001352	Ma, Chen-Chi Martin; Chen, Ken Hung; Kuan, Hsu Chiang; Chen, Shih Ming; ; Tsai, Ming Huang;	國立清華大學	2005.01-2015.12
A	水性聚胺基甲酸酯樹脂／黏土奈米複合材料的製備方法	中華民國	I230181	馬振基、莊文斌、 <u>關旭強</u>	國立清華大學	2005.04.01-2023.07.01
A	燃料電池用高阻氣高耐熱及導電性高分子複合材料雙極板之製備方法	中華民國	I267220	馬振基、 <u>關旭強</u> 、吳漢朗、蘇訓右、廖述杭、顏銓佑、林育鋒、	國立清華大學	2006.11.21-2025.05.23

A	Manufacturing Process of Conductive Polymer Composite Bipolar Plate for Fuel Cell Having High Gas Permeability-Resistance and Heat-Resistance	美國	US20060267235	Chen-Chi Martin Ma; <u>Hsu-Chiang</u> <u>Kuan</u> ;Han-Lang Wu;Hsun-Yu Su;Shu-Hang Liao;Chuan-Yu Yen;Yu-Feng Lin;Ying-Ying Cheng	國立清華大學	2006.11-
A	具有水交聯反應性質之木質纖維/塑膠強化複合材料的製備方法	中華民國	I275611	馬振基、官振豐、 <u>關旭強</u>	塑膠中心 國立清華大學	2007.03.11-2024.04.27
B	輸送帶滾輪冷卻設備	中華民國	M335499	官振豐、陳嘉勳、林焜章、鐘明吉、 <u>關旭強</u> 、彭新志、邱志豪、江金龍	遠東科技大學	2008.07.01-2017.10.30
B	塑膠造粒之水流循環裝置	中華民國	M340104	林焜章、陳嘉勳、鐘明吉、彭新志、官振豐、 <u>關旭強</u> 、吳灑杰、方勝平、江金龍	遠東科技大學	2008.09.11-2017.10.30
B	給料裝置	中華民國	M378219	林焜章、陳嘉勳、官振豐、 <u>關旭強</u> 、彭新志、鐘明吉、鄭其峰、蘇新雅、李德偉、江金龍	遠東科技大學	2010.04.11-2019.11.17
B	螺桿結構	中華民國	M378998	林焜章、陳嘉勳、官振豐、 <u>關旭強</u> 、彭新志、鐘明吉、羅郁淳、陳嘉良、邱志豪、江金龍	遠東科技大學	2010.04.21-2019.11.23
B	具電動裝置之熱澆道針閥控制裝置	中華民國	M380222	林焜章、陳嘉勳、官振豐、 <u>關旭強</u> 、彭新志、鐘明吉、王禎呈、黃紳和、王鶯瑩、吳	遠東科技大學	2010.05.11-2019.11.16
A	利用吹膜方式押出收縮膜之製程方法	中華民國	I327956	陳嘉勳、彭新志、 <u>關旭強</u> 、官振豐、林焜章、鐘明吉	遠東科技大學	2010.08.01-2027.08.29
B	發泡杯材積層機	中華民國	M390948	林焜章、 <u>關旭強</u> 、陳嘉勳、王鶯瑩、彭新志、官振豐	遠東科技大學	2010.10.21-2020.03.11
B	隔熱紙容器結構	中華民國	M391519	<u>關旭強</u> 、林焜章、陳嘉勳、官振豐、彭新志、王鶯瑩、吳灑杰	遠東科技大學	2010.11.01-2020.06.22

B	隔熱紙容器改良結構	中華民國	M391520	<u>關旭強</u> 、林焜章、陳嘉勳、官振豐、彭新志、王鶯瑩	遠東科技大學	2010.11.01-2020.06.22
B	隔熱紙容器	中華民國	M392800	<u>關旭強</u> 、林焜章、陳嘉勳、官振豐、彭新志、王鶯瑩、吳瀧杰	遠東科技大學	2010.11.21-2020.06.21
B	隔熱紙容器裝置	中華民國	M394292	<u>關旭強</u> 、林焜章、陳嘉勳、官振豐、彭新志、王鶯瑩	遠東科技大學	2010.12.11-2020.06.22
B	紙張淋膜裝置	中華民國	M396156	<u>關旭強</u> 、林焜章、陳嘉勳、官振豐、彭新志、王鶯瑩	遠東科技大學	2011.01.11-2020.06.21
B	隔熱容器結構	中華民國	M402866	;林焜章 ;陳嘉勳 ;官振豐 ;彭新志 ;陳嘉良	遠東科技大學	2011.05.01-2020.11.10
B	具有仿木紋之射出用模具	中華民國	M412062	官振豐;彭新志; <u>關旭強</u> ;陳嘉勳;林焜章;鐘明吉;羅郁淳;陳嘉良;江金龍	遠東科技大學	2011.09.21-2021.02.23
B	感溫變色之杯具隔熱環	中華民國	M411875	陳嘉勳、林焜章、彭新志、官振豐、 <u>關旭強</u> 、鐘明吉、王禎呈、黃紳和、江金龍	遠東科技大學	2011.09.21-2021.02.23
B	具隔熱裝置之紙杯	中華民國	M411876	<u>關旭強</u> ;林焜章；葉彥良;陳嘉勳;官振豐; 彭新志;羅郁淳	遠東科技大學	2011.09.21-2021.04.29
A	經改質之膨脹型石墨／經改質之熱塑性高分子之複合材料	中華民國	I352095	江金龍 ;王彙中 ;陳嘉勳 ;官振豐 ; <u>關旭強</u> ;顏瑋信 ;林焜章	弘光科技大學	2011.11.11-2027.09.02
A	經改質之膨脹型石墨／經改質之熱固性高分子之複合材料	中華民國	I352096	江金龍 ;王彙中 ;陳嘉勳 ;官振豐 ; <u>關旭強</u> ;許舒惟 ;林焜章	弘光科技大學	2011.11.11-2027.09.02

A	經矽烷改質劑改質之膨脹型石墨及其製法	中華民國	I352104	江金龍 ;王彙中 ;陳嘉勳 ;官振豐 ; <u>關旭強</u> ;許舒惟 ;林焜章	弘光科技大學	2011.11.11-2027.09.02
A	含有經改質之膨脹型石墨／熱塑性高分子之複合材料的難燃組成物	中華民國	I352113	江金龍 ;王彙中 ;陳嘉勳 ;官振豐 ; <u>關旭強</u> ;顏瑋信 ;林焜章	弘光科技大學	2011.11.11-2027.09.02
A	含有經改質之膨脹型石墨／熱固性高分子之複合材料的難燃組成物	中華民國	I352114	江金龍 ;王彙中 ;陳嘉勳 ;官振豐 ; <u>關旭強</u> ;許舒惟 ;林焜章	弘光科技大學	2011.11.11-2027.09.02
A	含碳奈米管之生物分解性高分子複合材料及其製備方法	中華民國	I353997	官振豐, <u>關旭強</u> , 陳嘉勳, 林焜章, 鐘明吉, 彭新志, 江金龍	遠東科技大學	2011.12.11-2027.04.03
A	具有生物分解性之奈米複合材料及其製備方法	中華民國	I354685	林焜章, 官振豐, <u>關旭強</u> , 陳嘉勳, 鐘明吉, 彭新志, 江金龍	遠東科技大學	2011.12.21-2027.05.28
B	自動定量給料裝置	中華民國	M421228	陳嘉勳, 林焜章, 官振豐, <u>關旭強</u> , 彭新志, 羅郁淳	遠東科技大學	2012.01.21-2021.09.12
B	發泡裝置之界面模結構	中華民國	M421226	林焜章, 陳嘉勳, 官振豐, 彭新志, <u>關旭強</u> , 鐘明吉, 陳嘉良	遠東科技大學	2012.01.21-2021.08.18
A	利用平膜方式押出收縮膜之製程方法	中華民國	I361135	<u>關旭強</u> , 彭新志, 陳嘉勳, 官振豐, 林焜章, 鐘明吉	遠東科技大學	2012.04.01-2027.08.29
A	具有水交聯反應性質之生物分解性高分子複合材料及其製造方法	中華民國	I363780	官振豐, <u>關旭強</u> , 鐘明吉, 林焜章, 陳嘉勳, 彭新志, 邱志豪, 江金龍	遠東科技大學	2012.05.11-2027.05.13
B	LED 燈管結構	中華民國	M431271	林焜章, 林舜天, 陳嘉勳, <u>關旭強</u> , 官振豐, 彭新志, 黃紳和	遠東科技大學	2012.06.11-2022.02.01

B	可控透光之導光條結構	中華民國	M434958	陳嘉勳, 林舜天, 林焜章, 官振豐, 彭新志, <u>關旭強</u> , 王禎呈	遠東科技大學	2012.08.01-2022.02.08
A	鉛酸電池輕量化的方法	中華民國	I380493	<u>關旭強</u> , 官振豐, 鐘明吉, 陳嘉勳, 林焜章, 彭新志, 江金龍	遠東科技大學	2012.12.21~2027.12.25
B	拉伸流變儀之荷重加壓裝置	中華民國	M445177	林焜章, 陳嘉勳, 彭新志, 官振豐, <u>關旭強</u> , 方勝平	遠東科技大學	2013.01.11-2022.09.04
A	經含雙鍵之矽氧烷改質劑改質之膨脹型石墨及其製法	中華民國	I385203	江金龍, 王彙中, 陳嘉勳, 官振豐, <u>關旭強</u> , 顏瑋信, 林焜章	弘光科技大學	2013.02.11-2027.09.02
A	高分子複合材料及其製造方法	中華民國	I398472	陳嘉勳、 <u>關旭強</u> 、官振豐、彭新志、林焜章、鐘明吉、王禎呈、黃紳和、吳瀧杰、江金龍	遠東科技大學	2013.06.11-2029.12.29
A	生質塑木複合材、產品及其製造方法	中華民國	I409300	<u>關旭強</u> 、官振豐、彭新志、陳嘉勳、林焜章、鐘明吉、江金龍	遠東科技大學	2013.09.21~2030.04.13
A	膨脹型石墨之製法	中華民國	I417240	江金龍;周鳳雯;王彙中;顏詮佑;陳嘉勳;官振豐; <u>關旭強</u>	弘光科技大學	2013.12.01~2029.09.17
A	高燃燒效率植物燃料之製程	中華民國	I431106	官振豐、 <u>關旭強</u> 、彭新志、陳嘉勳、林焜章、鐘明吉、鄭其峰、邱志豪、江金龍	遠東科技大學	2014.03.21~2030.05.19
A	用於製備膨脹型石墨之方法	中華民國	I430942	江金龍、周鳳雯、王彙中、顏詮佑、陳嘉勳、官振豐、 <u>關旭強</u>	弘光科技大學	2014.03.21~2030.12.28

A	用於製備石墨奈米片之方法	中華民國	I430943	江金龍、周鳳雯、王彙中、顏詮佑、陳嘉勳、官振豐、 <u>關旭強</u>	弘光科技大學	2014.03.21~2030.12.28
A	一種以回收利樂包再生複合板材之方法	中華民國	I458571	官振豐、 <u>關旭強</u> 、林焜章、陳嘉勳、彭新志、江金龍	遠東科技大學	2014.11.1~2032.12.19
A	模頭流道之製造方法	中華民國	I474916	林焜章、陳嘉勳、官振豐、彭新志、 <u>關旭強</u> 、陳嘉良	遠東科技大學	2015.03.01~2033.04.30
A	具遠紅外線效果之塑木複材及其製造方法	中華民國	I473849	<u>關旭強</u> 、官振豐、彭新志、陳嘉勳、林焜章、鐘明吉、邱志豪、蘇芷芸、江金龍	遠東科技大學	2015.02.21~2031.02.23
A	含液晶玻璃粉之木塑複合材製備方法	中華民國	I515052	陳嘉勳、 <u>關旭強</u> 、官振豐、彭新志、林焜章、鐘明吉、蘇新雅、吳瀧杰、江金龍	遠東科技大學	2016.01.01~2030.04.06.
A	複合材料容器之製造方法	中華民國	I527683	官振豐、 <u>關旭強</u> 、林焜章、陳嘉勳、彭新志、江金龍	遠東科技大學	2016.04.01~2032.12.19
A	控制添加植物性纖維之塑料在射出成型時表面平滑之方法	中華民國	I574818	彭新志、官振豐、 <u>關旭強</u> 、陳嘉勳、林焜章、鐘明吉、鄭其峰、李德偉、江金龍	遠東科技大學	2017.03.21~2031.02.23
B	礦坑塑膠幫浦	中華民國	M559366	<u>關旭強</u> 、鐘明吉、楊為勛	遠東科技大學	2018.05.01~2027.10.30
B	石墨烯奈米片液化石油氣壓力容器	中華民國	M559868	<u>關旭強</u> 、鐘明吉、楊為勛	遠東科技大學	2018.05.11~2027.11.06

B	石墨烯奈米片風電葉片	中華民國	M561131	<u>關旭強</u> 、鐘明吉、楊為勛	遠東科技大學	2018.06.01~2027.10.30
A	利用超音波製備石墨烯奈米片之方法	中華民國	I640472	<u>關旭強</u> 、鐘明吉、楊為勛	遠東科技大學	2018.11.11~2037.10.30
A	副木及其製作方法	中華民國	I655941	蕭惠華、官振豐、 <u>關旭強</u> 、鐘明吉、李泰和、龔柏霖	遠東科技大學	2019.04.11~2037.11.06.
A	塑木基材及其製造方法	中華民國	I656157	吳仰、官振豐、 <u>關旭強</u> 、鐘明吉、李泰和、龔柏霖、江金龍	遠東科技大學	2019.04.11~2037.12.21.
A	添加金屬粉末之積層列印材料	中華民國	I656012	官振豐、 <u>關旭強</u> 、龔傑、鐘明吉、蕭惠華、李泰和、龔柏霖	遠東科技大學	2019.04.11~2037.12.20.
A	迴轉輸料式積層製造設備及其列印頭	中華民國	I655914	官振豐、 <u>關旭強</u> 、龔傑、鐘明吉、蕭惠華、李泰和、龔柏霖	遠東科技大學	2019.04.11~2037.12.20.
A	添加陶瓷粉末之積層列印材料	中華民國	I663046	官振豐、 <u>關旭強</u> 、龔傑、鐘明吉、蕭惠華、李泰和、龔柏霖	遠東科技大學	2019.06.21~2037.12.21
A	添加木質、植物纖維之積層列印材料	中華民國	I664075	吳仰、官振豐、 <u>關旭強</u> 、鐘明吉、李泰和、龔柏霖、江金龍	遠東科技大學	2019.07.01~2037.12.21
A	積層製造之控制顏色深淺變化的方法及其裝置	中華民國	I686289	龔傑、官振豐、 <u>關旭強</u> 、鐘明吉、蕭惠華、李泰和、龔柏霖	遠東科技大學	2020.03.01~2037.12.21

B	電磁波遮蔽包	中華民國	M594376	柯凱仁、張濬承、 關旭強 、林芊秀	翰昱材料科技股份有限公司	
A	具撓性傳動機制之積層製造設備	中華民國	I695775	官振豐、 關旭強 、龔傑、鐘明吉、蕭惠華、李泰和、龔柏霖	遠東科技大學	2020.06.01~2037.12.20
A	多站式快速發酵有機質的方法	中華民國	I702201	鐘明吉、許顯榮、 關旭強 、吳俊毅	鐘明吉、許顯榮、 關旭強 、吳俊毅	2020.08.21~2038.12.06
A	利用超臨界流體製備石墨烯片之方法	中華民國	I716226	鐘明吉、 關旭強 、許顯榮	鐘明吉、 關旭強 、許顯榮	2021.01.11~2039.12.19
A	使 3D 列印產品具有味道之製作方法	中華民國	I721235	官振豐、 關旭強 、龔傑、鐘明吉、蕭惠華、李泰和、龔柏霖、汪明傑	遠東科技大學	2021.03.11~2037.12.20
A	具有味道之 3D 列印產品之製作方法	中華民國	I726182	官振豐、 關旭強 、龔傑、鐘明吉、蕭惠華、李泰和、龔柏霖	遠東科技大學	2021.05.01~2037.12.20
A	快速發酵有機質的方法	中華民國	I728262	鐘明吉、 關旭強 、吳俊毅	鐘明吉、 關旭強 、吳俊毅	2021.05.21~2038.08.16
A	利用奈米石墨片製備熱固性複合材料之方法	中華民國	I752391	關旭強 、鐘明吉、馬軍、孟慶寶	遠東科技大學	2022.01.11~2039.12.19

7. Technical transfer projects

技術名稱	專利名稱	被授權單位	簽約日期
PS 塑木複材(發泡)配方及混練造粒製程技術移轉	N/A	越南揚越企業股份有限公司	2007/04/01 至 2007/12/31
多層吹膜成型技術	N/A	龍盟機械股份有限公司	2007/04/10 至 2007/11/30
PET 物理增粘技術	N/A	瑞昇塑膠股份有限公司	2008/07/01 至 2009/12/31
具有生物分解性之奈米複合材料及其製備方法技術	N/A	承鋒智慧股份有限公司	2008/07/01 至 2009/08/30
CNT 表面修飾技術	N/A	嘉皇工業有限公司	2009/05/01 至 2009/12/31
CNT 或導電碳黑濕式研磨分散技術	N/A	憶昇實業有限公司	2009/07/01 至 2009/06/30
導熱體改質及複材混鍊製程技術	N/A	寶鴻精密股份有限公司	2010/08/01 至 2011/03/31
MCPCB 之超薄導熱介電材料及製程技術	N/A	揚越企業股份有限公司	2011/07/15 至 2012/06/30
MCPCB 之超薄導熱介電材料及製程技術	N/A	億光固態照明股份有限公司	2011/10/01 至 2012/05/31
環保複材無鹵阻燃技術開發	具有生物分解性之奈米複合材料及其製備方法	江蘇洪門實業有限公司	2012/10/01 至 2013/09/30
生質塑木複合材、產品及其製造方法	生質塑木複合材、產品及其製造方法	洪門壓克力有限公司	2013/12/01 至 2014/11/30
高分子複合材料及其製造方法	高分子複合材料及其製造方法	澳大利亞商 ADRIS PTY LIMITED	2014/07/01 至 2015/06/30
含碳奈米管之生物分解性高分子複合材料及其製備方法	含碳奈米管之生物分解性高分子複合材料及其製備方法	上海太倉敬富塑膠製品有限公司	2014/08/13 至 2019/08/12
生質塑木複合材、產品及其製造方法	生質塑木複合材、產品及其製造方法	太潤生技股份有限公司	2015/05/01 至 2018/04/30
具遠紅外線效果之塑木複材及其製造方法	具遠紅外線效果之塑木複材及其製造方法	太潤生技股份有限公司	2016/08/01 至 2018/08/31

複合材料容器之製造方法	複合材料容器之製造方法	太潤生技股份有限公司	2017/08/01 至 2018/07/31
利用超音波製備石墨烯奈米片之方法	利用超音波製備石墨烯奈米片之方法	太潤生技股份有限公司	2019/10/01 至 2020/07/31

8. Industrial-academic cooperation projects

計畫名稱	計畫內擔任之工作	起迄年月	補助或委託機構
二氫化碳超臨界氣體輔助奈米碳管官能基化暨其高分子複合材料性質之研究 (NSC 97-2218-E-269-001-)	主持人	2008/08/01~ 2009/07/31	國科會
以高分子相容劑包覆之奈米碳管製備熱塑性高分子複合材料及其性質研究 (NSC 98-2221-E-269-001-)	主持人	2009/08/01~ 2010/07/31	國科會
OPET 及 OPS 收縮膜製程加工技術開發計畫	主持人	2007/3/15~2008/2/29	彩麗薄膜股份有限公司
半導電 PE 材料開發	主持人	2007/5/25~2007/8/23	工業技術研究院
EMC 材料配方開發	主持人	2007/6/1~2007/11/30	南茂科技股份有限公司
環保 LSNH 及 EPR 開發	主持人	2007/7/1~2007/12/31	工業技術研究院
導熱粉體表面改質技術暨溶膠-凝膠合成技術轉委託研究計畫	主持人	2007/12/1~2008/5/30	寶鴻精密股份有限公司
FRP 回收材/聚烯烴複合材料開發	主持人	2007/12/1~2008/10/31	教育部
配方、加工成型、製程技術開發計畫	主持人	2008/3/1~2008/11/30	樹曜公司
提高 PET 回收品物性之技術開發	主持人	2008/04/01~2008/12/31	經濟部
高導熱性塊狀模造材料(BMC)之開發及其在高散熱元件上的應用	主持人	2008/6/1~2009/1/31	教育部
高濃度抗靜電劑母粒製備先期評估研究	主持人	2008/7/1~2008/12/31	聚益化學工業股份有限公司
高性能奈米碳管強化聚苯硫醚複合材料開發	主持人	2009/01/01~2009/12/31	教育部
導電性超韌尼龍複合材料開發	主持人	2009/03/01~2009/08/01	經濟部
符合 TUV 法規高耐候高耐	主持人	2009/03/07~2010/01/3	華榮電線電纜股份有限

燃之太陽能線纜開發計畫		1	公司
高強度 3C 電子產品透明殼材開發	主持人	2009/03/20~2009/08/19	經濟部
高導電複材母粒開發	主持人	2009/11/01~2010/04/30	經濟部
導熱粉體表面改質技術暨環氧樹脂增韌技術轉委託研究計畫	主持人	2009/11/01~2011/02/28	寶鴻精密股份有限公司
淋膜發泡杯改善專案計畫	主持人	2010/04/01~2010/09/30	統奕包裝股份有限公司
LED 燈罩用之 PPS 導熱複材暨合成耐衝擊 PMMA 技術先期研究	主持人	2010/05/01~2011/04/30	高福化學工業股份有限公司
阻燃 PC/PET 導熱複材配方及混練製程轉委託研究計畫	主持人	2010/07/03~2011/04/30	高福化學工業股份有限公司
CL-08 導電塑膠/橡膠委託加工配方調整與性質測試	主持人	2010/09/01~2011/08/31	中國合成橡膠股份有限公司
高性能橡膠配方暨製程技術轉委託研究計畫	主持人	2011/07/08~2012/04/30	華榮電線電纜(股)公司
高導熱性聚苯硫醚複合材料開發及其在 LED 散熱燈殼的應用評估	主持人	2011/05/01~2011/08/31	舍泓複材股份有限公司
PP 複材配方製程技術先期研究	主持人	2012/05/01~2012/08/31	Living Plastic Industry
尼龍複材配方製程先期研究	主持人	2012/06/01~2012/09/30	Living Plastic Industry
石墨烯製備新型導電熱塑性複材及其於電雙極板的應用開發	主持人	2012/06/01~2012/09/30	聚創開發股份有限公司
TPE 無鹵阻燃材料混練暨成型技術轉委託研究計畫	主持人	2012/12/01~2013/10/31	大益鞋業股份有限公司
功能性透明塑膠膜材開發	主持人	2013/03/18~2013/11/30	工業技術研究院
PP 複合綠材先期研究評估計畫	主持人	2013/06/01~2013/12/31	方衛良品股份有限公司
車廂訊號連結環保線纜披覆材轉委託研究計畫	主持人	2013/07/01~2014/04/30	華榮電線電纜股份有限公司
導熱塑膠成型加工技術	主持人	2013/08/01~2014/04/30	翰昱材料科技股份有限公司
3D 列印用具生分解性線材之合膠配方暨抽線製程規劃與模具設計技術開發	主持人	2013/12/01~2014/12/31	三緯國際立體列印科技股份有限公司

3D 列印用尼龍線材之配方暨抽線製程建立計畫	主持人	2014/04/01~2014/12/31	三緯國際立體列印科技股份有限公司
塑膠幫浦用玻纖強化尼龍複合材料開發計畫	主持人	2015/04/01~2016/06/30	澳大利亞商 ADRIS PTY LIMITED
應用石墨烯製備抗靜電無鹵防火高性能複合材料及其在塑膠幫浦用之應用(MOST 105-2622-E-269-020 -CC3)	主持人	2016/11/01~2017/10/31	科技部
循環複料應用於次世代熔融積層綠色製程及其高值化產品開發(1/3) (MOST_106-3114-E-269-001)	主持人	2017/06/01~2018/05/31	科技部
MDF及多層共押百葉窗框押出製程開發暨整廠輸出分項計畫	主持人	2018/01/01~2018/10/31	太倉敬富塑膠製品有限公司(上海麗方集團)
防火板材開發評估計畫	主持人	2018/06/01-2018/12/31	Subur Tiasa Holdings Berhad 馬來西亞常青集團
無硫低溫可膨脹奈米石墨片量產製程及其於PET纖維之應用 (MOST107-2622-E-269-009 -CC3)	主持人	2018/11/01~2019/10/31	科技部
以單壁奈米碳管製作防電磁波複合材料及其紡織品之開發計畫 (MOST 108-2622-8-269-001)	主持人	2019/03/16~2019/11/30	科技部
奈米石墨片開發及其複材研究(I,II,III,IV)	主持人	2020/06/01-2021/11/30	UniSA STEM and Future Industries Institute (澳大利亞南澳大學未來產業中心)
生質材料回收技術研究及其機械物性檢測	主持人	2020/10/01-2021/05/31	瀚達創意有限公司
具生分解性之甘蔗纖維/生質無塑合膠複材配方開發暨量產製程規劃	主持人	2021/01/20-2021/05/31	本騰農業生技有限公司
日本廢杉木皮再製防火木屑板及塑木板之研究 (MOST 110-2622-E-269-003)	主持人	2021/06/01-2022/05/31	科技部

高功能性複材開發-委託試驗 II	主持人	2021/11/01-2022/10/31	極鷗全球股份有限公司
永續複合材料開發計畫	主持人	2022/02/01-2023/01/31	中國石油化學工業開發股份有限公司