Curriculum Vitae

LAI, Yu-Ying 賴育英
yuyinglai@ntu.edu.tw; +886-2-33664665
Associate Professor, Institute of Polymer Science and Engineering, National Taiwan University
Taipei 10617, Taiwan

Research interests

Synthesis, catalysis, organic optoelectronics, and quantum chemical computation

Experience

2020–present	Associate Professor, Institute of Polymer Science and Engineering, National Taiwan University, Taiwan
2016–2020	Assistant Professor, Institute of Polymer Science and Engineering, National Taiwan University, Taiwan
2015–2016	Postdoctoral Research, Prof. Yen-Ju Cheng's group, Department of Applied Chemistry, National Chiao Tung University, Taiwan
2013–2014	Postdoctoral Research, Prof. Andrew Holmes' group, Bio21 Institute, University of Melbourne, Australia
2012–2013	Postdoctoral Research, Prof. Yen-Ju Cheng's group, Department of Applied Chemistry, National Chiao Tung University, Taiwan

Education

2006–2011	D.Sc., Prof. Peter Chen's group, Department of Chemistry and Applied Biosciences, ETH Zürich, Switzerland
2002–2004	M.Sc., Prof. Tien-Yau Luh's group/Prof. Yu Wang's group, Department of Chemistry, National Taiwan University, Taiwan
1998–2002	B.Sc., Department of Chemistry, National Taiwan Normal University, Taiwan

Awards

2023	Young Scientist Award, The Polymer Society, Taipei (111 年度中華民國高分子學會 傑出高分子青年科技獎)
2022	Exceptional Performance, National Taiwan University (國立臺灣大學 2022 年度績優)
2022	Academic award, College of Engineering, National Taiwan University (國立臺灣大學工學院 111 年度學術勵進獎)
2022	Teaching award, National Taiwan University (國立臺灣大學 110 學年度教學優良獎)
2021	Exceptional Performance, National Taiwan University (國立臺灣大學 2021 年度績優)
2020	Teaching award, National Taiwan University (國立臺灣大學 108 學年度教學優良獎)
2019	Teaching award, National Taiwan University (國立臺灣大學 107 學年度教學優良獎)

2016–2019 MOST subsidizing special talents in colleges and universities (科技部補助大專校院獎勵特殊優秀人才)。

Publications

63. Yen-Ting Chen, Yen-Yu Chen, **Yu-Ying Lai***, and Yen-Ju Cheng*, Synthesis and theoretical investigation of phenanthrodithiophene diimide, Arkivoc, 2023, 2, 202311992.
62. Pei-Yu Chen, Ling-Ning Ko, Yen-Yu Chen, Chii-Shen Yang*, and **Yu-Ying Lai***, Integrating Conjugated Polymers with Bacteriorhodopsin to Realize Quasi Dual-Gate Organic Field-Effect Transistors, Advanced Electronic Materials, 2023, 2300278.
61. Yen-Yu Chen and **Yu-Ying Lai***, Synthesis of 3,3'-(Ethane-1,2-diylidene)bis(indolin-2-one) Promoted by Thermally-activated Electron Transfer and Photoreduction of CO_2 to CH_4 and CO, ChemSusChem, 16, e202300604.
60. Chia-Lin Tsai, Tung-Hsien Chan, Han-Cheng Lu, Ching-Li Huang, Kai-En Hung, **Yu-Ying Lai*** and Yen-Ju Cheng*, Synthesis of Angular-Shaped Naphthodithiophenediimide and its Donor-Acceptor Copolymers as Nonvolatile Polymer Additives for Organic Solar Cells, Journal of Materials Chemistry A, 2023, 11, 7572–7583.
59. Tien-Liang Tsai, Yen-Yu Chen, Cheng-Hao Chang, and **Yu-Ying Lai***, Further investigation of conjugated length and dispersity on light-driven hydrogen evolution facilitated by conjugated polymers, Journal of the Chinese Chemical Society, 2023, 70, 1176–1186.
58. Shih-Hao Wang, Pin-Zhen Chen, Yen-Yu Chen, Farheen Khurshid, Cheng-Wei Cai, **Yu-Ying Lai***, Po-Wen Chung, Ru-Jong Jeng*, Syang-Peng Rwei, and Leeyih Wang*, Naphthalene Diimide-Based Donor-Acceptor-Donor Small Molecules as Metal-Free Organocatalysts for Photocatalytic CO_2 Reaction, ACS Applied Materials & Interfaces, 2022, 14, 38, 43109–43115.
57. Han-Sheng Sun, Tien-Liang Tsai, Cheng-Hao Chang, Yen-Yu Chen, Hau-Ren Yang, Jeffrey Chi-Sheng Wu,* and **Yu-Ying Lai***, Effect of the Length of Bromoalkyl Chains on Light-Driven Hydrogen Evolution Facilitated by Fluorene-based Polymers, Sustainable Energy & Fuels, 2022, 6, 4470–4476.
56. Kai-En Hung, Yu-Sheng Lin, Yung-Jing Xue, Hau-Ren Yang, **Yu-Ying Lai**, Je-Wei Chang, Chun-Jen Su, An-Chung Su, Chain-Shu Hsu, U-Ser Jeng*, and Yen-Ju Cheng*, Non-Volatile Perfluorophenyl-Based Additive for Enhanced Efficiency and Thermal Stability of Nonfullerene Organic Solar Cells via Supramolecular Fluorinated Interactions, Advanced Energy Materials, 2022, 12, 2103702.
55. ShihHao Wang, Rathinam Raja, Chuen-Yo Hsiow, Farheen Khurshid, Hau-Ren Yang, Po-Wen Chung, **Yu-Ying Lai**, Ru-Jong Jeng*, and Leeyih Wang*, Chromatic Fulleropyrrolidine as Long-Lived Metal-Free Catalyst for CO_2 Photoreduction Reaction, ChemSusChem, 2022, 15, e202102476.
54. Wei-Chun Lai, Shih-Hao Wang, Han-Sheng Sun, Che-Wei Liao, Tao-Yuan Liu, Hao-Ting Lee, Hau-Ren Yang, Leeyih Wang*, and **Yu-Ying Lai***, Stable and Exclusive Formation of CO from CO_2 Photoreduction with H_2O Facilitated by Linear Fluorene and Naphthalene Diimide-based Conjugated Polymers, ACS Applied Polymer Materials, 2022, 4, 521-526.

53. Xia-Lin Wang, Nicholas Yiching Chiang, Jian-Jhih Peng, Lei Yu, Li-Jun Xu, Hau-Ren Yang, Bih-Yaw Jin*, Pinglu Zhang*, **Yu-Ying Lai***, Ze Li*, Guo-Qiao Lai*, and Tien-Yau Luh*, A Fischer-Type Ruthenium Carbene Complex as a Metathesis Catalyst for the Synthesis of Enol Ethers, The Journal of Organic Chemistry, 2021, 86, 17629-17639.
52. Hau-Ren Yang, Yen-Yu Chen, Han-Sheng Sun, Shih-Huang Tung, Shou-Ling Huang, Po-Chia Huang, Jey-Jau Lee, and **Yu-Ying Lai***, Strengthening the Intrachain Interconnection of Polymers by the Naphthalene Diimide–Pyrene Complementary Interactions, Macromolecules, 2021, 54, 7282-7290.
51. Hau-Ren Yang and **Yu-Ying Lai***, Regulate the Electron Mobility and Threshold Voltage of P(NDI2OD–T2)-based Organic Field-Effect Transistors by the Compatibility Principle, Advanced Electronic Materials, 2021, 7, 2000939.
50. Hau-Ren Yang, Chun-Wei Pai, Han-Sheng Sun, Cuo Wu, **Yu-Ying Lai***, Shu-Chih Haw, Jey-Jau Lee, and Jin-Ming Chen, Establishment of the Interconnectivity among P(NDI2OD-T2)s in Organic Field-Effect Transistors by Non-Conjugated Crystalline Polymers, Macromolecules, 2020, 53, 10349-10356.
49. Huai-Hsuan Liu, Shao-Ling Chang, Kuo-Hsiu Huang, Fong-Yi Cao, Kuang-Yi Cheng, Han-Sheng Sun, **Yu-Ying Lai**, and Yen-Ju Cheng*, Two-Dimensional Tetrathienonaphthalenes-Based Donor–Acceptor Copolymers: Synthesis, Isomeric Effect, and Organic Field-Effect Transistors, Macromolecules, 2020, 53, 7740.
48. Jhih-Siang Yang, Yi-Chen Chang, Quan-Hou Huang, **Yu-Ying Lai***, and Wei-Hung Chiang*, Microplasma-Enabled Nanocarbon Assembly for the Diameter-Selective Synthesis of Colloidal Graphene Quantum Dots, Chemical Communications, 2020, 56, 10365.
47. Yu-Jen Lin, Han-Sheng Sun, Hau-Ren Yang, **Yu-Ying Lai***, Kai-Yuan Hou, and Yi-Hung Liu, Aqueous Palladium-Catalyzed Direct-Arylation Polymerization of 2-Bromothiophene derivatives, Macromolecular Rapid Communications, 2020, 41, 2000021.
46. Huai-Hsuan Liu, Wei-Wei Liang, **Yu-Ying Lai**, Yen-Chen Su, Hau-Ren Yang, Kuang-Yi Cheng, Sheng-Cih Huang and Yen-Ju Cheng*, Synthesis of Side-Chain Regioregular and Main-Chain Alternating Poly(bichalcogenophene)s and an ABC-Type Periodic Poly(terchalcogenophene), Chemical Science, 2020, 11, 3836-3844.
45. **Yu-Ying Lai***, Hau-Ren Yang, Hao-Ting Lee, Tien-Liang Tsai, and Han-Sheng Sun, In vitro and In silico Studies on the Base Effect in Palladium-Catalyzed Direct Arylation, Asian Journal of Organic Chemistry, 2020, 9, 296-302.
44. Jian-Jhih Peng, Biswajit Panda, Kamani Satyanarayana, Hau-Ren Yang, Shou-Ling Huang, Mao Yung Huang, Chun-hsien Chen, Guoqiao Lai, **Yu-Ying Lai***, and Tien-Yau Luh*, Stereospecific Synthesis of Poly(methylene-E-vinylene) by Ring Opening Metathesis Polymerization of Substituted Cyclopropene Using Grubbs Catalysts, Macromolecules, 2019, 52, 20, 7749-7755.
43. Hau-Ren Yang, **Yu-Ying Lai***, and Jey-Jau Lee, Further Examination of Interconnection in Conjugated Polymers for Organic Field-effect Transistors, Advanced Electronic Materials, 2019, 5, 1900213.

42. Hau-Ren Yang, Chun-Wei Pai, **Yu-Ying Lai***, Applications of Conjugated Polymers in Organic Field-effect Transistors, CHEMISTRY (Chemical Society Located in Taipei), 2019, 77, 1, 49-61.
41. Tze-Gang Hsu, Hsiao-Chieh Chou, Ming-Ju Liang, **Yu-Ying Lai***, Yen-Ju Cheng*, Regio- and stereo-selective [4+4] photodimerization of angular-shaped dialkyltetracenedithiophene, Chemical Communications, 2019, 55, 381-384.
40. **Yu-Ying Lai***, Vi-Hsiang Huang, Hao-Ting Lee, Hau-Ren Yang, Stacking Principles on π- and Lamellar- stacking for Organic Semiconductors Evaluated by Energy Decomposition Analysis, ACS omega, 2018, 3, 18656-18662.
39. Shi-Yen Chen, Yu-Chieh Pao, Santosh K. Sahoo, Wen-Chia Huang, **Yu-Ying Lai**, Yen-Ju Cheng*, Synthesis of unsymmetrical benzotrichalcogenophenes by N-heterocyclic carbene–palladium-catalyzed intramolecular direct C3-arylation of chalcogenophenes, Chemical Communications, 2018, 54, 1517-1520.
38. Fong-Yi Cao, Yung-Lung Chen, **Yu-Ying Lai**, Yen-Ju Cheng*, Synthesis of Two-Dimensional Terbenzodithiophene-based Derivative by Palladium-catalyzed C─H Benzannulation and Its Donor–Acceptor Copolymers for Organic Photovoltaics, Journal of the Chinese Chemical Society, 2018, 65, 1, 133-140.
37. Kai-En Hung, Che-En Tsai, Shao-Ling Chang, **Yu-Ying Lai**, U-Ser Jeng, Fong-Yi Cao, Chain-Shu Hsu, Chun-Jen Su, Yen-Ju Cheng*, Bispentafluorophenyl-Containing Additive: Enhancing Efficiency and Morphological Stability of Polymer Solar Cells via Hand-Grabbing-Like Supramolecular Pentafluorophenyl:Fullerene Interactions, ACS Applied Materials & Interfaces, 2017, 2017, 9, 43861-43870.
36. Erik P. A. Couzijn‡, **Yu-Ying Lai**‡, Armin Limacher, Peter Chen, Intuitive Quantifiers of Charge Flows in Coordinate Bonding, Organometallics, 2017, 36, 3205-3214. ‡equally contributed.
35. **Yu-Ying Lai***, Hau-Ren Yang, Chemical structure characterization of polymers (in Mandarin), Chemical Engineering (The Taiwan I. Ch. E.), 2017, 64, 3, 3-14.
34. De-Yang Chiou, Fong-Yi Cao, Jhih-Yang Hsu, Che-En Tsai, **Yu-Ying Lai**, U-Ser Jeng, Jianquan Zhang, He Yan, Chun-Jen Su, Yen-Ju Cheng*, Synthesis and side-chain isomeric effect of 4, 9-/5, 10-dialkylated-β-angular-shaped naphthodithiophenes-based donor–acceptor copolymers for polymer solar cells and field-effect transistors, Polymer Chemistry, 2017, 8, 2334-2345.
33. Chia-Hao Lee, **Yu-Ying Lai**, Jhih-Yang Hsu, Po-Kai Huang, Yen-Ju Cheng*, Side-chain modulation of dithienofluorene-based copolymers to achieve high field-effect mobilities, Chemical Science, 2017, 8, 2942-2951.
32. Chia-Hao Lee, **Yu-Ying Lai**, Fong-Yi Cao, Jhih-Yang Hsu, Zong-Liang Lin, U-Ser Jeng, Chun-Jen Su, Yen-Ju Cheng*, Synthesis, molecular and photovoltaic/transistor properties of heptacyclic ladder-type di(thienobenzo)fluorene-based copolymers, Journal of Materials Chemistry C, 2016, 4, 11427-11435.
31. Che-En Tsai, Ruo-Han Yu, Fang-Ju Lin, **Yu-Ying Lai**, Jhih-Yang Hsu, Sheng-Wen Cheng, Chain-Shu Hsu*, Yen-Ju Cheng*, Synthesis of a 4,9-

didodecyl angular-shaped naphthodiselenophene building block to achieve high-mobility transistors, Chemistry of Materials, 2016, 28, 5121–5130.

30. Yu-Chieh Pao, Cheng-Tai Yang, **Yu-Ying Lai**, Wen-Chia Huang, Chain-Shu Hsu, Yen-Ju Cheng*, Synthesis and field-effect transistor properties of a diseleno[3,2-b:2′,3′-d]silole-based donor–acceptor copolymer: investigation of chalcogen effect, Polymer Chemistry, 2016, 7, 4654-4660.
29. Fong-Yi Cao, **Yu-Ying Lai**, Yung-Lung Chen, Yen-Ju Cheng*, Self-assembled tri-, tetra- and penta-ethylene glycols as easy, expedited and universal interfacial cathode-modifiers for inverted polymer solar cells, Journal of Materials Chemistry A, 2016, 4, 8707-8715.
28. Wei-Wei Liang, Yu-Shun Lin, **Yu-Ying Lai***, Yen-Ju Cheng*, Synthesis, characterization, and photovoltaic applications of donor-acceptor alternating and random copolymers based on a ladder-type nonacyclic structure, Reactive and Functional Polymers, 2016, 108, 113-121.
27. Yung-Lung Chen, Jhih-Yang Hsu, Fang-Yu Lin, **Yu-Ying Lai**, Hsiao-Chieh Chou, Yen-Ju Cheng*, Synthesis and Isomeric Effects of Ladder-Type Alkylated Terbenzodithiophene Derivatives, The Journal of Organic Chemistry, 2016, 81, 2534-2542.
26. Shao-Ling Chang, Chih-Wen Lu, **Yu-Ying Lai**, Jhih-Yang Hsu, Yen-Ju Cheng*, Synthesis and Molecular Properties of Two Isomeric Dialkylated Tetrathienonaphthalenes, Organic Letters, 2016, 18, 368–371.
25. **Yu-Ying Lai**, Huan-Hsuan Chang, Yun-Yu Lai, Wei-Wei Liang, Che-En Tsai, Yen-Ju Cheng*, Angular-Shaped 4,10-Dialkylanthradiselenophene and its Donor-Acceptor Conjugated Polymers: Synthesis, Physical, Transistor, and Photovoltaic Properties, Macromolecules, 2015, 48, 6994-7006.
24. Sheng-Wen Cheng, De-Yang Chiou, Che-En Tsai, Wei-Wei Liang, **Yu-Ying Lai**, Jhih-Yang Hsu, Chain-Shu Hsu, Itaru Osaka, Kazuo Takimiya*, Yen-Ju Cheng*, Angular-Shaped 4,9-Dialkyl α- and β-Naphthodithiophene-Based Donor–Acceptor Copolymers: Investigation of Isomeric Structural Effects on Molecular Properties and Performance of Field-Effect Transistors and Photovoltaics, Advanced Functional Materials, 2015, 25, 6131–6143.
23. Bolong Zhang, Jegadesan Subbiah, **Yu-Ying Lai**, Jonathan M. White, David J. Jones, Wallace W. H. Wong*, One-pot selective synthesis of a fullerene bisadduct for organic solar cell applications, Chemical Communications, 2015, 51, 9837-9840.
22. Che-En Tsai, Ming-Hung Liao, Yung-Lung Chen, Sheng-Wen Cheng, **Yu-Ying Lai**, Yen-Ju Cheng*, Chain-Shu Hsu*, Triarylamine-Based Crosslinked Hole-Transporting Material with a Ionic Dopant for High-Performance PEDOT:PSS-Free Polymer Solar Cells, Journal of Materials Chemistry C, 2015, 3, 6158-6165.
21. **Yu-Ying Lai**, Tsu-Chien Tung, Wei-Wei Liang, Yen-Ju Cheng*, Synthesis of Poly(3-hexylthiophene), Poly(3-hexylselenophene) and Poly(3-hexylselenophene-alt-3-hexylthiophene) by Direct C-H Arylation Polymerization via N-Heterocyclic Carbene Palladium Catalysts, Macromolecules, 2015, 48, 2978–2988.
20. François Grenier, Badrou Réda Aich, **Yu-Ying Lai**, Maxime Guérette, Andrew B. Holmes, Ye Tao, Wallace W.H. Wong*, Mario Leclerc*, Electroactive and photoactive poly[Isoindigo-alt-EDOT] synthesized using

direct (hetero)arylation polymerization in batch and in continuous flow, Chemistry of Materials, 2015, 27, 2137–2143.
19. Pei-Chi Jwo, **Yu-Ying Lai**, Che-En Tsai, Yun-Yu Lai, Wei-Wei Liang, Chain-Shu Hsu, Yen-Ju Cheng*, A New Ladder-Type Germanium-Bridged Dithienocarbazole Arene and Its Donor–Acceptor Conjugated Copolymers: Synthesis, Molecular Properties, and Photovoltaic Applications, Macromolecules, 2014, 47, 7386–7396.
18. Yu-Chieh Pao, Yung-Lung Chen, Yen-Ting Chen, Sheng-Wen Cheng, **Yu-Ying Lai**, Wen-Chia Huang, Yen-Ju Cheng*, Synthesis and Molecular Properties of Tricyclic Biselenophene-Based Derivatives with Nitrogen, Silicon, Germanium, Vinylidene, and Ethylene Bridges, Organic Letters, 2014, 16, 5724–5727.
17. JS Wu, Jyun-Fong Jheng, Jen-Yun Chang, **Yu-Ying Lai**, Kuan-Yi Wu, Chien-Lung Wang*, Chain Shu Hsu*, Synthesis and Morphological Studies of a Poly(5,6-difluorobenzo-2,1,3-thiadiazole-4,7-diyl-alt-quaterchalcogenophene) Copolymer with 7.3% Polymer Solar Cells Efficiency, Polymer chemistry, 2014, 5, 6472–6479.
16. **Yu-Ying Lai**, Yen-Ju Cheng*, Chain-Shu Hsu*, Applications of Functional Fullerene Materials in Polymer Solar Cells, Energy & Environmental Science, 2014, 7, 1866-1883.
15. Chia-Hao Lee, **Yu-Ying Lai**, Sheng-Wen Cheng, Yen-Ju Cheng*, Synthesis and Supramolecular Assembly of Pentacyclic Dithienofluorene and Diselenophenofluorene Derivatives, Organic Letters, 2014, 16, 936–939.
14. Ming-Hung Liao, Yin-Yu Lai, **Yu-Ying Lai**, Yen-Ting Chen, Che-En Tsai, Wei-Wei Liang, Yen-Ju Cheng*, Reducing Regioisomers of Fullerene Bisadducts by Tether-Directed Remote Functionalization: Investigation of Electronically and Sterically Isomeric Effects on Bulk-Heterojunction Solar cells, ACS Appl. Mater. Interfaces, 2014, 6, 996–1004.
13. Ming-Hung Liao, Che-En Tsai, **Yu-Ying Lai**, Fong-Yi Cao, Jhong-Sian Wu, Chien-Lung Wang, Chain-Shu Hsu, Ian Liau, Yen-Ju Cheng*, Morphological Stabilization by Supramolecular Perfluorophenyl-C60 Interactions Leading to Efficient and Thermally Stable Organic Photovoltaics, Advanced Functional Materials, 2014, 24, 1418–1429.
12. Sheng-Wen Cheng, De-Yang Chiou, **Yu-Ying Lai**, Ruo-Han Yu, Chia-Hao Lee, Yen-Ju Cheng*, Synthesis and Molecular Properties of Four Isomeric Dialkylated Angular-Shaped Naphthodithiophenes. Organic Letters, 2013, 15, 5338–5341.
11. Huan-Hsuan Chang, Che-En Tsai, **Yu-Ying Lai**, Wei-Wei Liang, So-Lin Hsu, Chain-Shu Hsu, Yen-Ju Cheng*, A New Pentacyclic Indacenodiselenophene Arene and its Donor-Acceptor Copolymers for Solution Processable Polymer Solar Cells and Transistors: Synthesis, Characterization and Investigation of Alkyl/Alkoxy Side-Chain Effect, Macromolecules, 2013, 46, 7715–7726.
10. **Yu-Ying Lai**, Jyun-Ming Yeh, Che-En Tsai, Yen-Ju Cheng*, Synthesis, Molecular and Photovoltaic Properties of an Indolo[3,2-b]indole-Based Acceptor-Donor-Acceptor Small Molecule, European Journal of Organic Chemistry, 2013, 23, 5076–5084.
09. Wei-Wei Liang, Chih-Yu Chang, **Yu-Ying Lai**, Sheng-We Cheng, Huan-Hsuan Chang, Yin-Yu Lai, Yen-Ju Cheng*, Chien-Lung Wang*, Chain-Shu

Hsu*, Formation of Nanostructured Fullerene Interlayer through Accelerated Self-Assembly and Cross-Linking of Trichlorosilane Moieties Leading to Enhanced Efficiency of Photovoltaic Cells, Macromolecules, 2013, 46, 4781–4789.

08. Yung-Lung Chen, Wei-Shun Kao, Che-En Tsai, **Yu-Ying Lai**, Yen-Ju Cheng*, Chain-Shu Hsu*, A New Ladder-Type Benzodi(cyclopentadithiophene)-Based Donor-Acceptor Polymer and a Modified Hole-Collecting PEDOT:PSS Layer to Achieve Tandem Solar Cells with Open Circuit Voltage of 1.62 V, Chemical Communications, 2013, 49, 7702–7704.
07. **Yu-Ying Lai**, Ping-I Shih, Yi-Peng Li, Chen-En Tsai, Jhong-Sian Wu, Yen-Ju Cheng*, Chain-Shu Hsu*, Interface Engineering to Enhance the Efficiency of Conventional Polymer Solar Cells by Alcohol-/Water-Soluble C_{60} Materials Doped with Alkali Carbonates, ACS Applied Materials and Interfaces, 2013, 5, 5122–5128.
06. Jyun-Fong Jheng, **Yu-Ying Lai**, Jhong-Sian Wu, Yi-Hsiang Chao, Chien-Lung Wang*, Chain-Shu Hsu*, Influences of the Non-Covalent Interaction Strength on Reaching High Solid-State Order and Device Performances of a Low Bandgap Polymer with Axisymmetrical Structural Units, Advanced Materials, 2013, 25, 2445–2451.
05. **Yu-Ying Lai**, Yen-Ju Cheng*, Chiu-Hisang Chen, Sheng-Wen Cheng, Fong-Yi Cao, Chain-Shu Hsu*, Synthesis, Photophyiscal and Photovoltaic Properties of a New Class of Two-dimensional Conjugated Polymers Containing Donor-Acceptor Chromophores as Pendant Groups, Polymer chemistry, 2013, 4, 3333–3344.
04. Jhong-Sian Wu, **Yu-Ying Lai**, Yen-Ju Cheng*, Chih-Yu Chang, Chien-Lung Wang, Chain-Shu Hsu*, A New sp2-sp2 Dialkylethylene-Bridged Heptacyclic Ladder-Type Arene for High Efficiency Polymer Solar Cells, Advanced Energy Materials, 2013, 3, 457–465.
03. Huan-Hsuan Chang, Che-En Tsai, **Yu-Ying Lai**, De-Yang Chiou, So-Lin Hsu, Chain-Shu Hsu, Yen-Ju Cheng*, Synthesis, Molecular and Photovoltaic Properties of Donor–Acceptor Conjugated Polymers Incorporating a New Heptacylic Indacenodithieno[3,2-b]thiophene Arene, Macromolecules, 2012, 45, 9282–9291.
02. **Yu-Ying Lai**, Marc Bornand, Peter Chen*, Homogeneous Model Complexes for Supported Rhenia Metathesis Catalysts, Organometallics, 2012, 31, 7558–7565.
01. **Yu-Ying Lai**, Nai-Ti Lin, Yi-Hung Liu, Yu Wang, Tien-Yau Luh*, Alumina-mediated dealkylative dimerization of 4-aminobenzyl esters, Tetrahedron, 2007, 63, 6051-6055.