Chen, Hsien-Yeh （陳賢燁）

Assistant Professor

B.S. in Chemical Engineering
National Taiwan University, 1999
M.S. in Chemical Engineering
University of Michigan, 2004
Ph.D. in Chemical Engineering
University of Michigan, 2008

Research and Professional Interests
Biointerface Engineering
CVD Polymerization Process
Functional Polymer Thin Films
Surface Bioconjugate Chemistry

Projects (started from 2013)

1. Multifunctional polymer thin films via CVD polymerization and their applications in biomedical coatings
   化學氣相沈積法合成多元官能性高分子鍍膜及其在生醫材料上之應用
   Sponsored by National Science Council
   NT$ 1,824,000; 2011/08/01-2013/07/31

2. Vapor-Based Reactive Polymer Coatings: Bacteria AdhesionStudy Based on Molecularly Designed Substrata
   氣相功能性高分子鍍膜：基底表面分子特性對細菌黏附機制之研究
   Sponsored by National Science Council
   NT$ 4,170,000; 2012/08/01-2015/07/31

Journal Papers

1. Yaseen Elkasabi, Himabindu Nandivada, **Hsien-Yeh Chen**, Srijanani Bhaskar, John D'Arcy, Lidija Bondarenko, and Joerg Lahann "Partially Fluorinated Poly-p-xylylenes Synthesized by CVD Polymerization," *Chemical Vapor Deposition* 15, 142-149 (2009). (SCI, EI)

2. Wei-Wen Hu, Yaseen Elkasabi, **Hsien-Yeh Chen**, Ying Zhang, Joerg Lahann, Scott J. Hollister, and Paul H. Krebsbach "The use of reactive polymer coatings to facilitate gene delivery from poly ([var epsilon]-caprolactone) scaffolds," *Biomaterials* 30, 5785-5792 (2009). (SCI, EI)

3. John P. Seymour, Yaseen M. Elkasabi, **Hsien-Yeh Chen**, Joerg Lahann, and Daryl R. Kipke "The insulation performance of reactive parylene films in implantable electronic devices," *Biomaterials* 30, 6158-6167 (2009). (SCI, EI)

4. **Hsien-Yeh Chen**, and Joerg Lahann "Surface Patterning Strategies for Microfluidic Applications based on Functionalized Poly-*p*-xylylenes," *Bioanalysis*, 10, 1717-1728 (2010). (SCI, EI)

5. **Hsien-Yeh Chen**, Michael Hirtz, Xiaopei Deng, Thomas Laue, Harald Fuchs, and Joerg Lahann "Substrate-Independent Dip-Pen Nanolithography Based on Reactive Coatings, " *Journal of the American Chemical Society*, *132*, 18023-18025 (2010). (SCI, EI)

6. **Hsien-Yeh Chen**, and Joerg Lahann "Designable Biointerfaces Using Vapor-Based Reactive Polymers," *Langmuir*, *27*, 34-48 (2011). (SCI, EI)

7. Jyun-Ting Wu, Chi-Hui Huang, Wei-Chieh Liang, Yen-Lin Wu, Jiashing Yu, **Hsien-Yeh Chen** "Reactive Polymer Coatings: A General Route to Thiol-ene and Thiol-yne Click Reactions," *Macromolecular Rapid Communications*, 33(10), 922-927 (2012). (SCI, EI)

8. Mu-Gi Wu, Hung-Lun Hsu, Kai-Wen Hsiao, Chih-Chen Hsieh, and **Hsien-Yeh Chen** "Vapor-Deposited Parylene Photoresist: A Multipotent Approach Toward Chemically and Topographically Defined Biointerfaces,"*Langmuir*, *28*, 14313-14322 (2012). (SCI, EI)

9. Meng-Yu Tsai, Ching-Yu Lin, Chi-Hui Huang, Jiun-An Gu, Sheng-Tung Huang, Jiashing Yu and **Hsien-Yeh Chen** "Vapor-Based Synthesis of Maleimide-Functionalized Coating for Biointerface Engineering," *Chemical Communications*, *48*, 10969-10971 (2012). (SCI, EI)

10. Tsung-Yen Tsou, **Hsien-Yeh Chen**, Chih-Chen Hsieh* "Bihydrogel particles as free-standing mechanical pH microsensors," *Applied Physics Letters*, 102(3), 031901-031904 (2013). (SCI, EI)

11. **Hsien-Yeh Chen,*** Ting-Ju Lin, Meng-Yu Tsai, Chiao-Tzu Su, Ruei-Hung Yuan, Chih-Chen Hsieh, Yao-Jhen Yang, Cheng-Che Hsu, Hao-Ming Hsiao, and Yin-Chu Hsua "Vapor-Based Tri-Functional Coatings," *Chemical Communications*, 49,4531-4533 (2013). (SCI, EI)

12. Hao-Ming Hsiao,* Chien-Han Lin, Ying-Chih Liao, **Hsien-Yeh Chen** and Tzu-Wei Wang "Hemodynamic Behavior of Coronary Stents in Straight and Curved Arteries," *Current Nanoscience*, in press (2013).). (SCI, EI)

13. Chiao-Tzu Su, Ruei-Hung Yuan, Yung-Chih Chen, Ting-Ju Lin, Hsiu-Wen Chien, Chih-Chen Hsieh, Wei-Bor Tsai, Chih-Hao Chang,* **Hsien-Yeh Chen***. "A Facile Approach toward Protein-Resistant Biointerfaces Based on Photodefinable Poly-p-xylylene Coating," *Colloids and Surfaces B: Biointerfaces*, in press (2013). (SCI, EI)

14. Meng-Yu Tsai, Yung-Chih Chen, Ting-Ju Lin, Yin-Chu Hsu, Ching-Yu Lin, Ruei-Hung Yuan, Jiashing Yu, Ming-Sheng Teng, Michael Hirtz, Mark Hung-Chih Chen, Chih-Hao Chang*, **Hsien-Yeh Chen***. "Vapor-Based Multicomponent Coatings for Antifouling and Biofunctional Synergic Modifications," *Advanced Functional Materials, in press* (2013). (SCI, EI)

Patents

1. Joerg Lahann, Himabindu Nandivada, **Hsien-Yeh Chen** "Reactive Coatings for Regioselective Surface Modification" *U.S. Patent* (2011), US 7909928 B2.

2. Joerg Lahann, **Hsien-Yeh Chen** "Dry Adhesion Bonding" *U.S. Patent* (2011), US 77947148 B2.