

Prof Mei-Jywan Syu

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Functional Materials and Biosensing Lab (功能性材料與生醫感測)

Research Interests

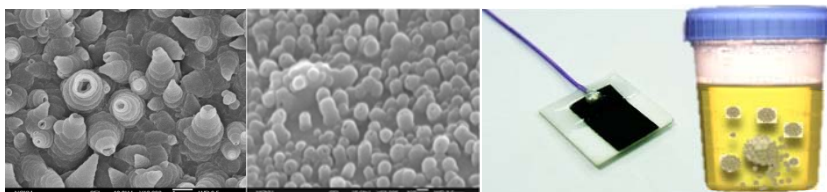
1. Synthesis, modification, characterization, and applications of **molecularly imprinted polymeric** (organic, hybrid organic-inorganic, electro-conducting, fluorescent, polymeric matrix doped with ionic liquid, etc.) **materials**, in the shape of granules, films or core-shells. The applications may include: specific binding; fluorescence detection; electro-detection (amperometric, potentiometric, impedance, QCM); column (chromatographic) separation/ purification.
2. **Urinary biosensing chip system**
3. Synthesis of **biocompatible nanomaterials** (nano-spheres, nanofilms, nanofibers) for the targeting, hyperthermia, and biosensing applications
4. **Supramolecular polymer, metal-organic framework (MOF)** for sorption, sensing, and catalysis

Selected Publications

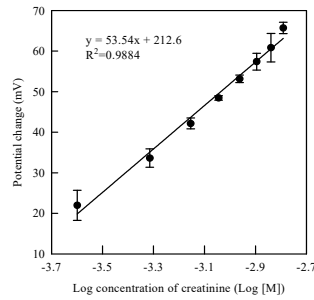
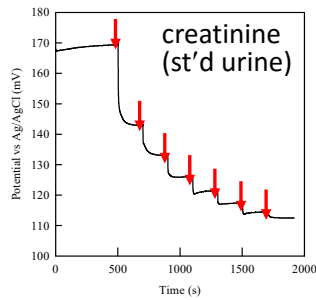
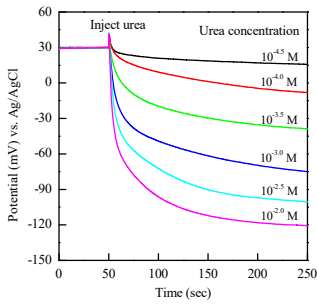
1. **Mei-Jywan Syu***, Shih-Hsun Lin, SC Shiesh (許梅娟, 林士勛, 謝淑珠) 電化學分析樣品之白血球酯化酵素之裝置。中華民國新型專利, 2016 一月生效
2. 許耀維, **許梅娟***, 生醫微檢測晶片, 化工技術, 21(5), May, 2013
3. 馬偉哲, 許耀維, 阮翌翔, 蘇建倫, 羅錦興*, **許梅娟*** 可攜式腎功能居家檢測系統 雅博科技獎, 生物醫學工程創意設計製作競賽, 高雄科技園區, Oct. 26, 2012.
4. LP Wu, SY Hong, **MJ Syu***, etc. Investigation of hyperthermia effect from β -CD modified magnetic nanoparticles. 第七屆高雄國際儀器展, 研究論文壁報比賽優等獎, July 19–21, 2012
5. **許梅娟***, 化工雜誌 2012 六月號, 231 期, “微感測技術”專輯主編
6. **MJ Syu***, etc. Analytical Chemistry: **(1)** 82(21), 8821, 2010; **(2)** 81(6), 2098, 2009.
7. **MJ Syu***, etc. Biosensors and Bioelectronics: **(1)** 24, 2671, 2009; **(2)** 22, 1694, 2007; **(3)** 22(4), 550, 2006; **(4)** 21(12), 2345, 2006.
8. **MJ Syu***, YM Nian, YS Chang, XZ Lin, SC Shiesh, TC Chou. J Chromat A 1122, 1/2, 54, 2006.
9. **MJ Syu***, etc. Biomaterials: **(1)** 27(9), 2083, 2006; **(2)** 26, 4684, 2005; **(3)** 26, 2759, 2005.
10. **M Syu***, etc. Analytica Chim Acta: **(1)** 539, 97, 2005; **(2)** 539, 107, 2005; **(3)** 504(1), 167, 2004
11. **MJ Syu***, BJ Chen, ST Chou. Ind Eng Chem Res 42, 6862, 2003.
12. **M Syu***. Review – Biological production of 2,3-BDL, invited, Appl Microbiol Biotechnol 55, 10, 2001.

生醫感測晶片 (Biosensing)

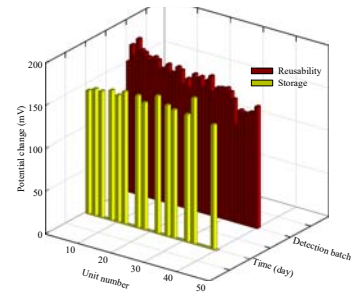
攜帶式居家型尿液生醫檢測晶片



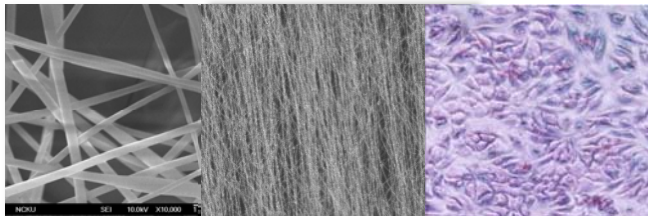
肌酸酐連續注入標準尿之感測與校正



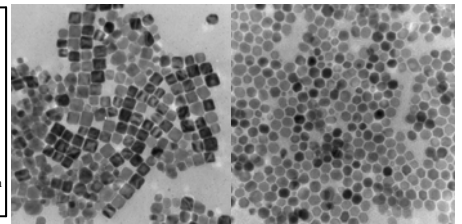
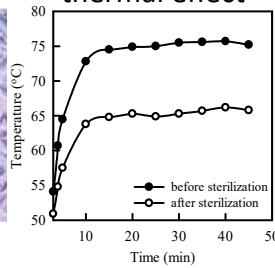
儲存性穩定性測試



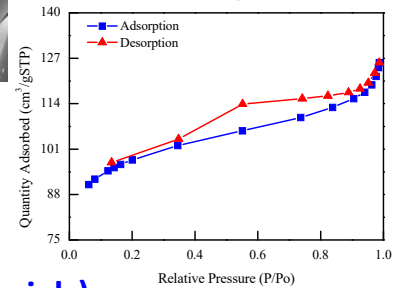
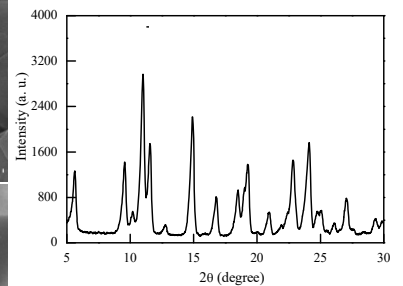
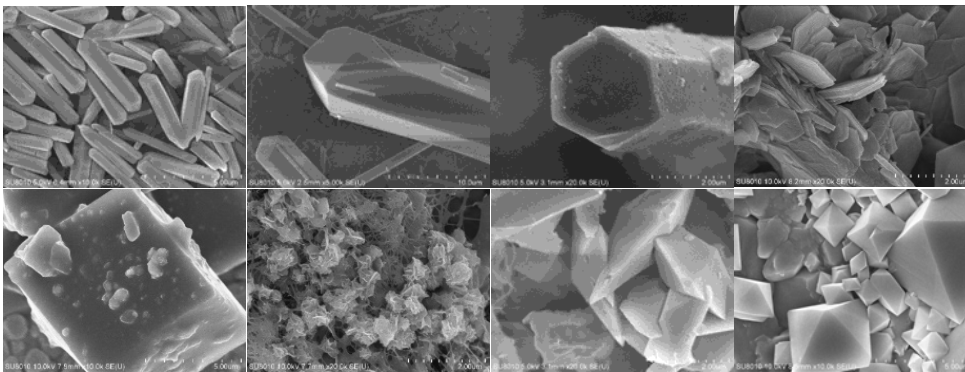
磁性奈米材料 (Magnetic nanomaterials)



thermal effect



金屬有機結構化合物 (Metal-organic frameworks)



	CoTPyP
BET surface area (m ² /g)	333
Langmuir surface area (m ² /g)	442

模版高分子材料 (Molecularly imprinted polymeric (MIP) materials)

