

Supporting Information

Preparation of a Molecularly Imprinted Film on Quartz Crystal Microbalance Chip for Determination of Furanic Compounds

Wei-Liang Lin ¹, Chung-Yin Lin ^{2,3,*} and Dar-Fu Tai ^{1,4,*}

¹ Department of Chemistry, National Dong Hwa University, Hualien 97403, Taiwan; usanawes@gmail.com

² Medical Imaging Research Center, Institute for Radiological Research, Chang Gung University and Chang Gung Memorial Hospital, Taoyuan 33302, Taiwan

³ Department of Nephrology and Clinical Poison Center, Chang Gung Memorial Hospital, Taoyuan 33302, Taiwan

⁴ Department of Life Science and Institute of Biotechnology, National Dong Hwa University, Hualien 97403, Taiwan

* Correspondence: winwood7@mail.cgu.edu.tw (C.-Y.L.); dftai@gms.ndhu.edu.tw (D.-F.T.); Tel.: +886-3-2118800 (ext. 3865) (C.-Y.L.); +886-3-890-3579 (D.-F.T.)

Supporting Information

3. Results and Discussion

3.1. Synthesis and properties of (*Methacr-L-Cys-NHBn*)₂ and (*Methacr-L-Ser-NHBn*) Characterization of (*Methacr-L-Cys-NHBn*)₂

¹H NMR (300 MHz, CDCl₃, δ): 1.77 (s, 3H), 3.02 (m, 2H), 4.4 (q, 2H), 5.22 (s, 1H), 5.5 (d, 2H), 7.22-7.28 (m, 5H).

¹³C NMR (75.5 MHz, CDCl₃, δ): 18.3, 43.8-44, 46.7, 53.6, 121, 127.4-127.6, 128-128.2, 128.7, 137.6-137.8, 138.9, 168.5, 170.2

IR(cm⁻¹):164.78, 2926.59, 3317.1

[α]_D²⁸ = +72° (CH₂Cl₂, c=0.325, l=1 dm)

Mass (MALDI) = 555.28 m/z

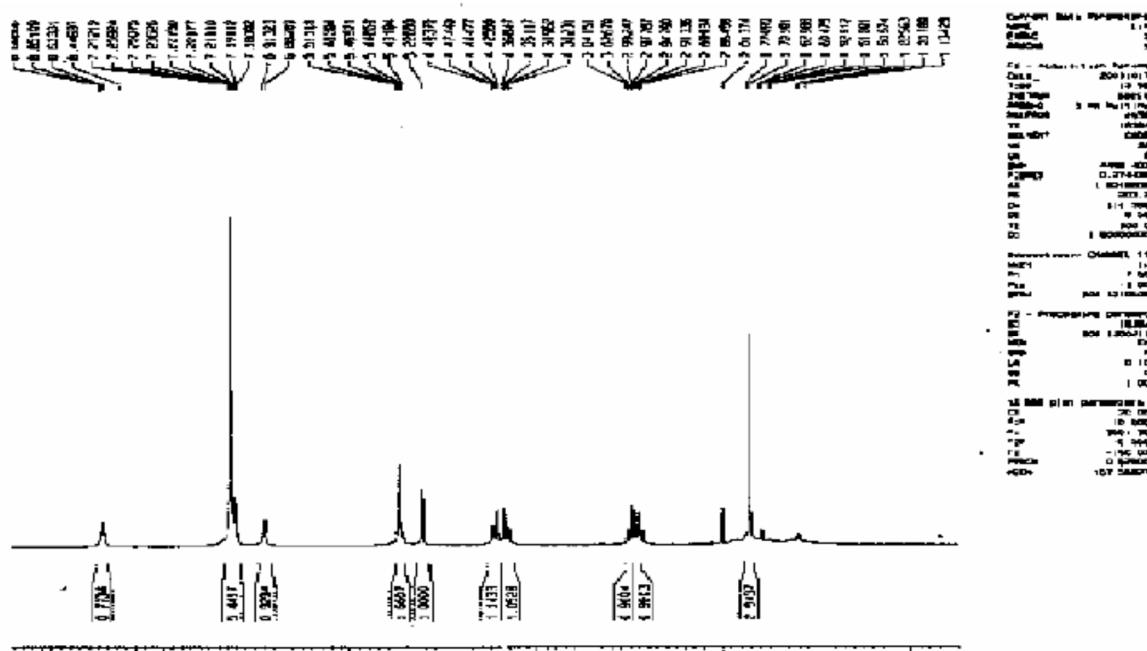


Figure S1. ¹H NMR spectrum of (Methacr-L-Cys-NHBn)₂.

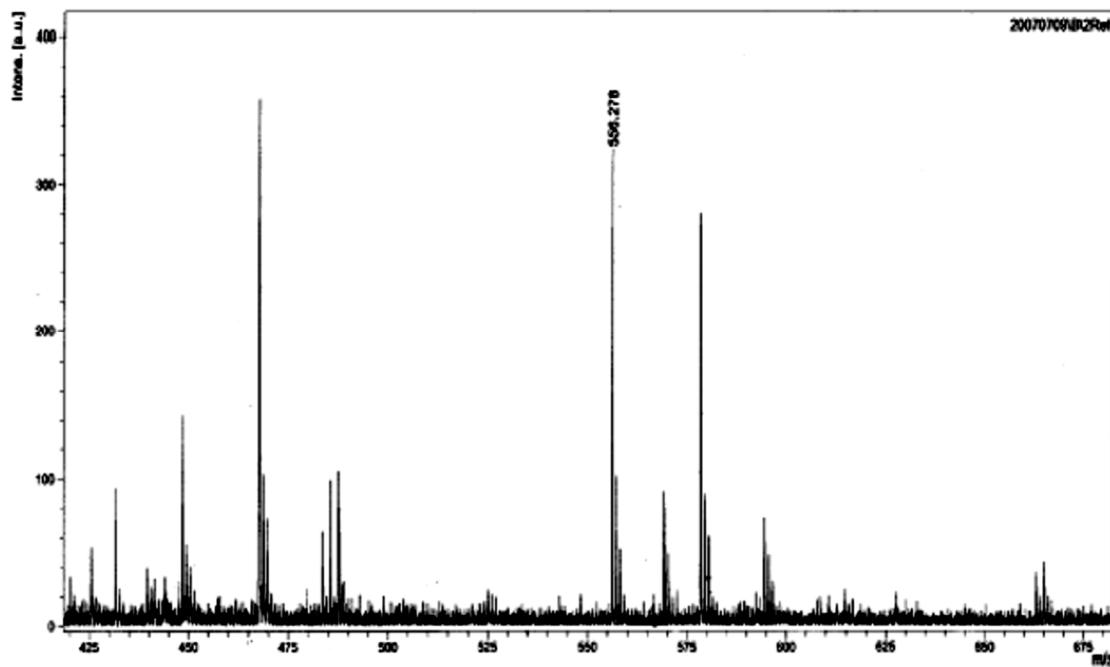


Figure S2. ^{13}C NMR spectrum of $(\text{Methacr-L-Cys-NHBn})_2$.

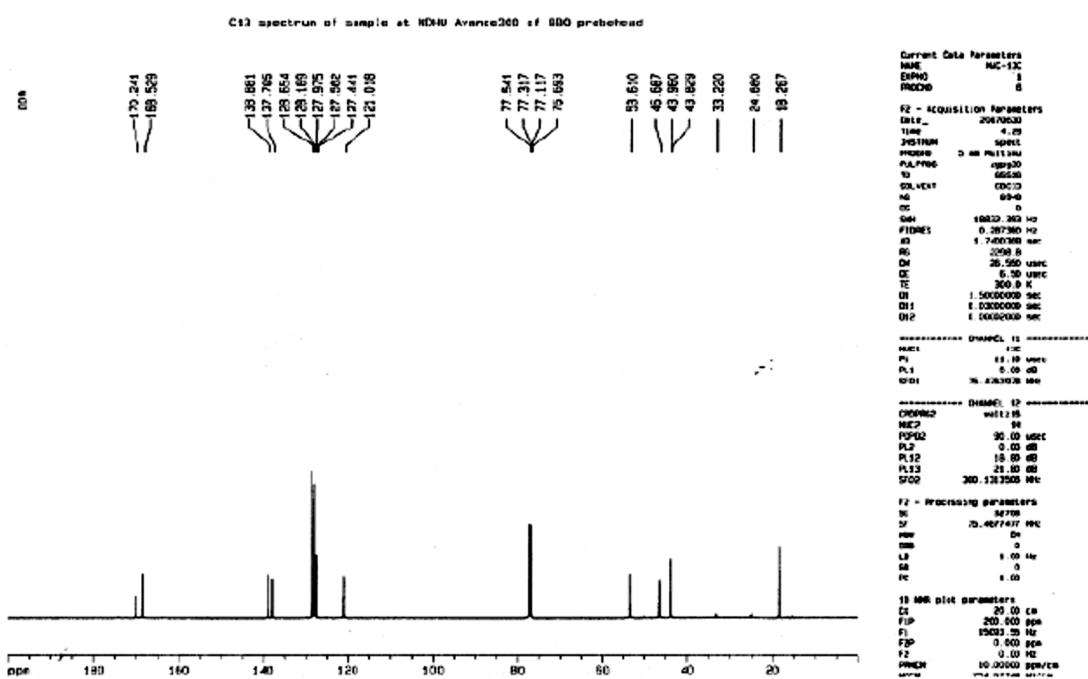


Figure S3. Mass spectrum of $(\text{Methacr-L-Cys-NHBn})_2$.

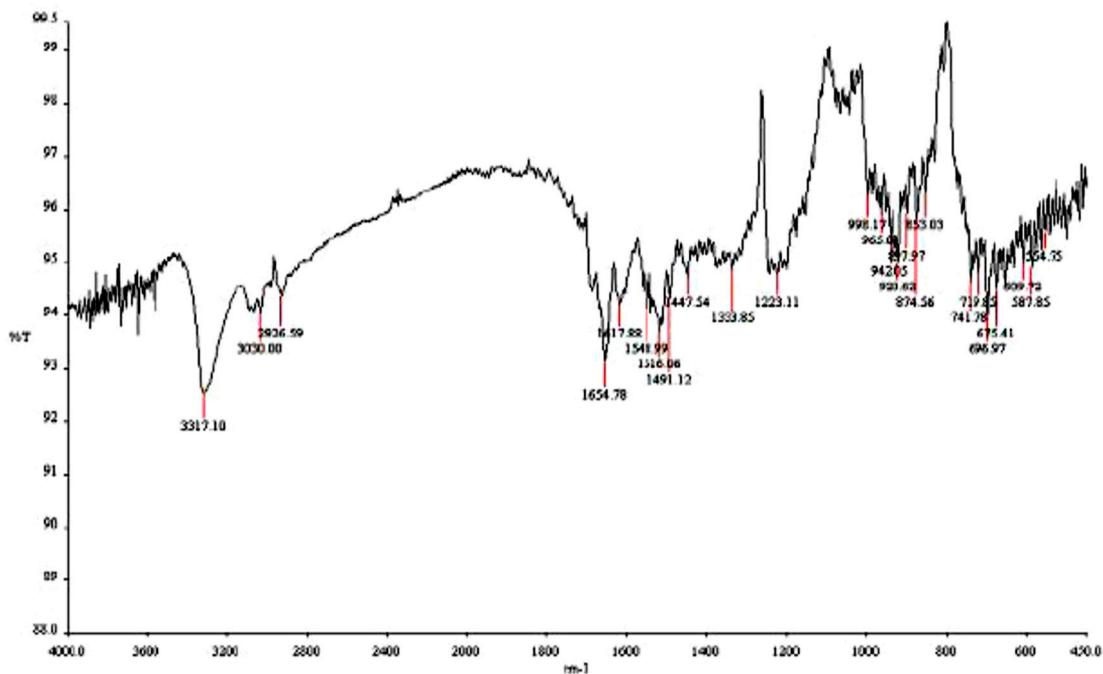


Figure S4. IR spectrum of (Methacry-L-Cys-NHBn)₂.

3.2. Characterization of Methacry-L-Ser-NHBn

¹H NMR (300 MHz, MeOH-d₄, δ): 1.95 (s, 3H), 3.82 (m, 2H), 4.44-4.46 (d, 2H), 4.56-4.59 (m, 1H), 5.43 (s, 1H), 5.81 (s, 1H), 7.24-7.34 (m, 5H).

¹³C NMR (75.5 MHz, MeOH-d₄, δ): 17.3, 42.8-43.2, 55.6-55.8, 61.5-61.7, 120, 126.78-126.84, 127.01-127.1, 128.13, 138.3-139.5, 142.6, 169.68, 170.85-171.1

IR(cm⁻¹): 1041.80, 1658.52, 2879.10-2939.32, 3313.70

$[\alpha]_D^{25} = -8.33^\circ$ (MeOH, c=0.3, l=1 dm)

Mass (MALDI) = 262.42 m/z

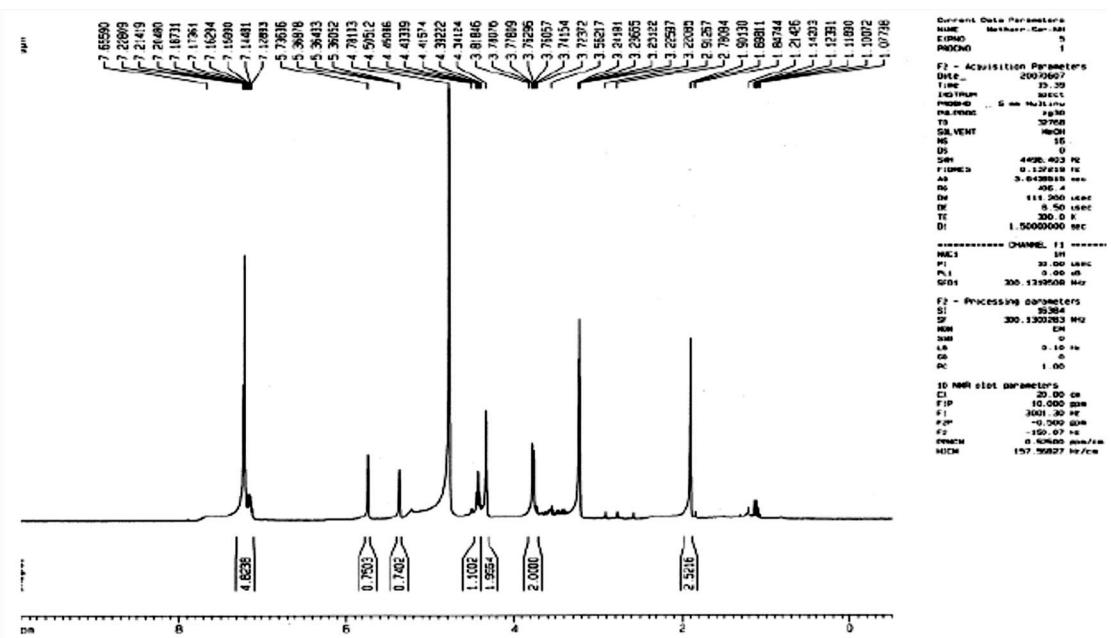


Figure S5. ^1H NMR spectrum of Methacr-L-Ser-NHBn.

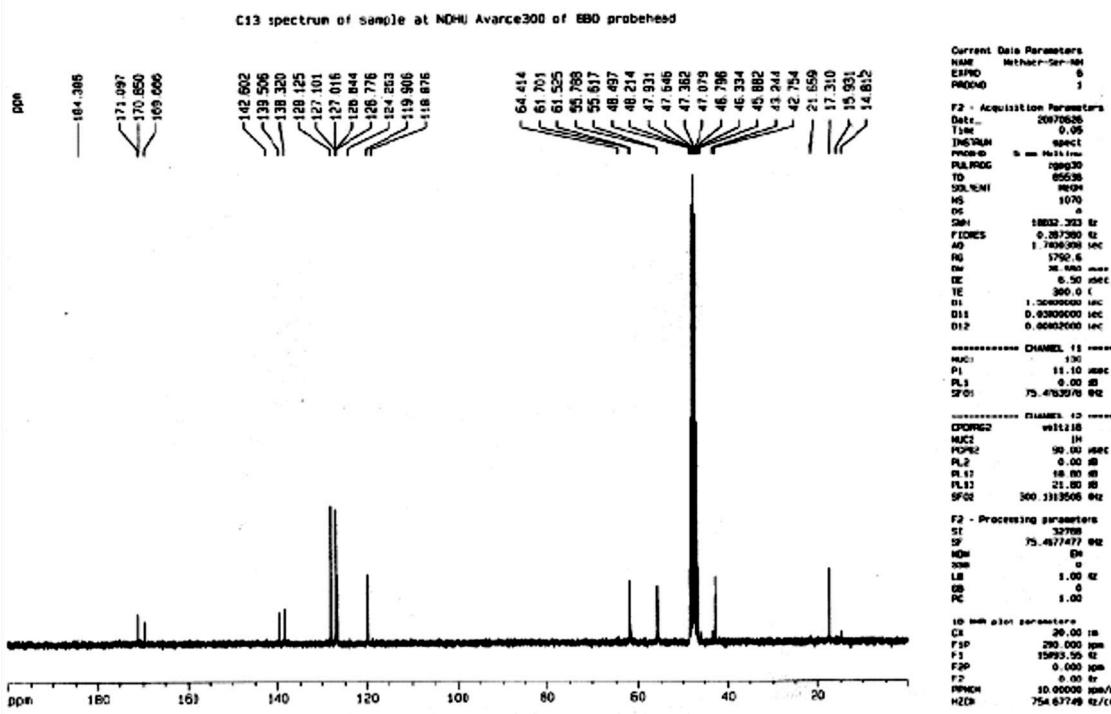


Figure S6. ^{13}C NMR spectrum of Methacr-L-Ser-NHBn.

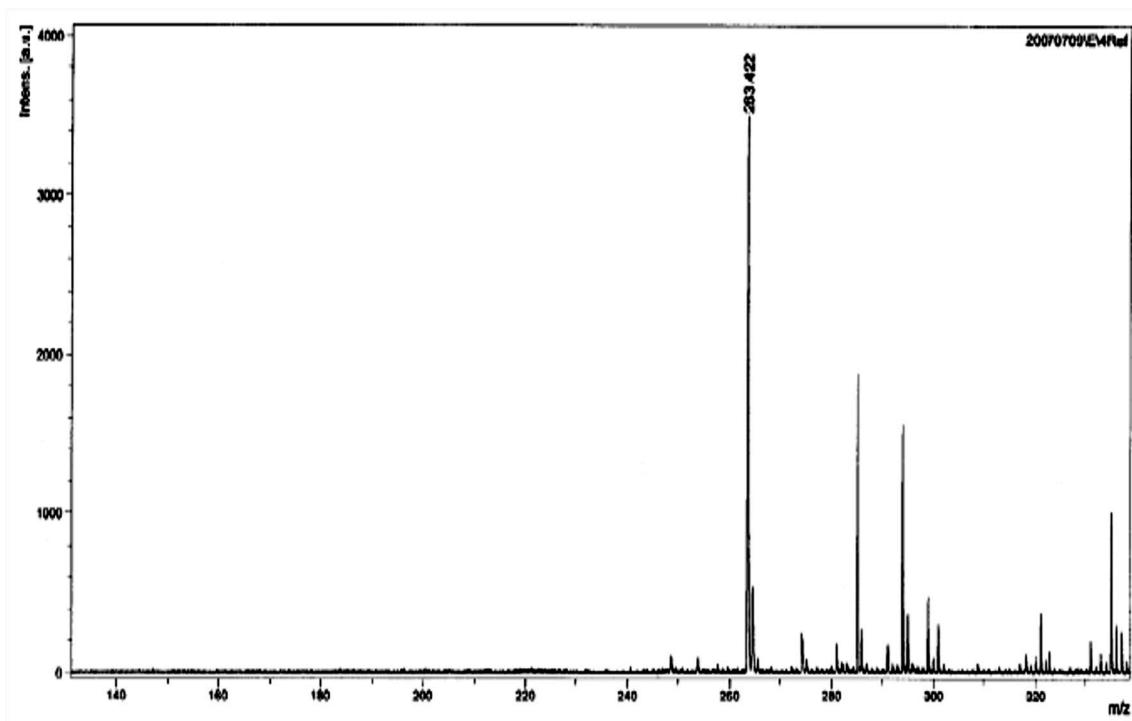


Figure S7. Mass spectrum of Methacr-L-Ser-NHBn.

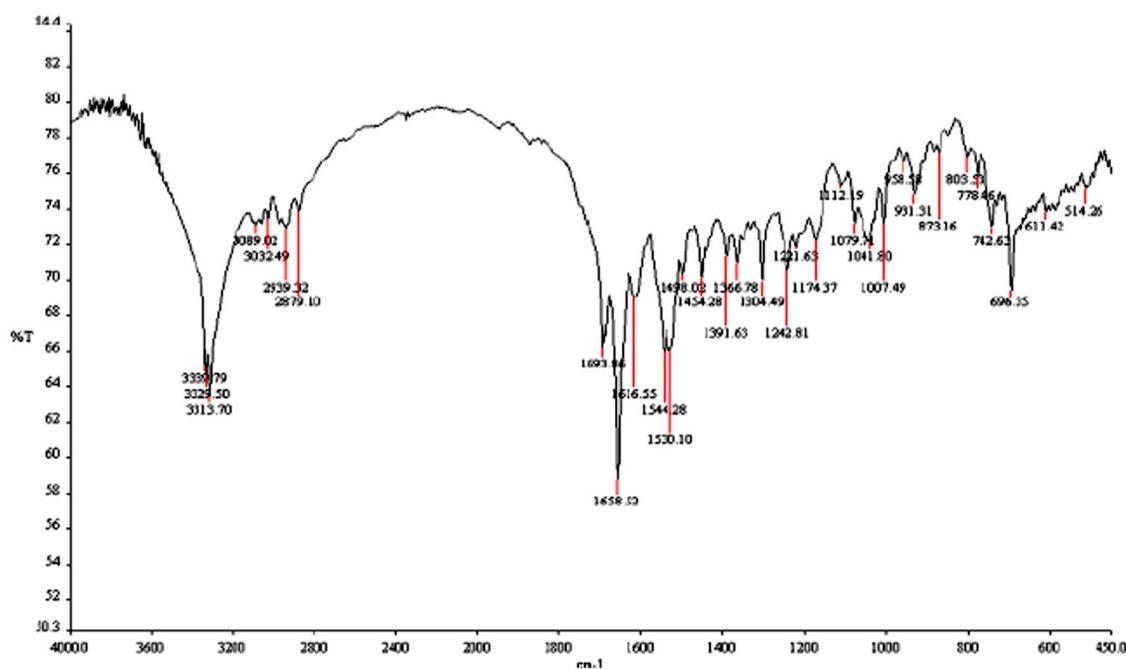


Figure S8. IR spectrum of Methacr-L-Ser-NHBn.