

Supplementary Data

Design, synthesis and biological evaluation of a novel Cu²⁺- selective fluorescence sensor for bio-detection and chelation

Yu Gao*, Yazhen Li, Xiping Yang, Fangfei He, Jiamei Huang, Minghong Jiang,
Zaihui Zhou, Haijun Chen*

College of Chemistry, Fuzhou University, Fuzhou, Fujian, China, 350108

Corresponding authors:

*Yu Gao, PhD

College of Chemistry

Fuzhou University

Fuzhou, Fujian 350108, China

Email: hellogaoyu@126.com

*Haijun Chen, PhD

College of Chemistry

Fuzhou University

Fuzhou, Fujian 350108, China

Email: chenhajj@gmail.com

Table of Contents

Fig. S1, Fig. S2, Fig. S3, Copies of ¹H NMR, ¹³C NMR spectra and HRMS of **FZU-06,001** and **FZU-06,002**

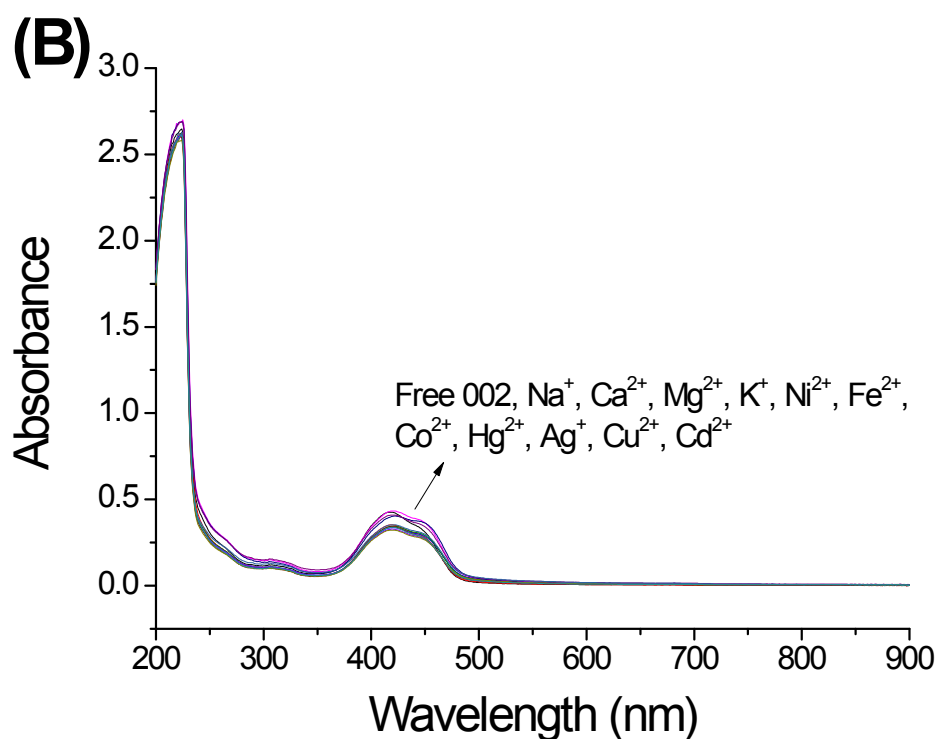
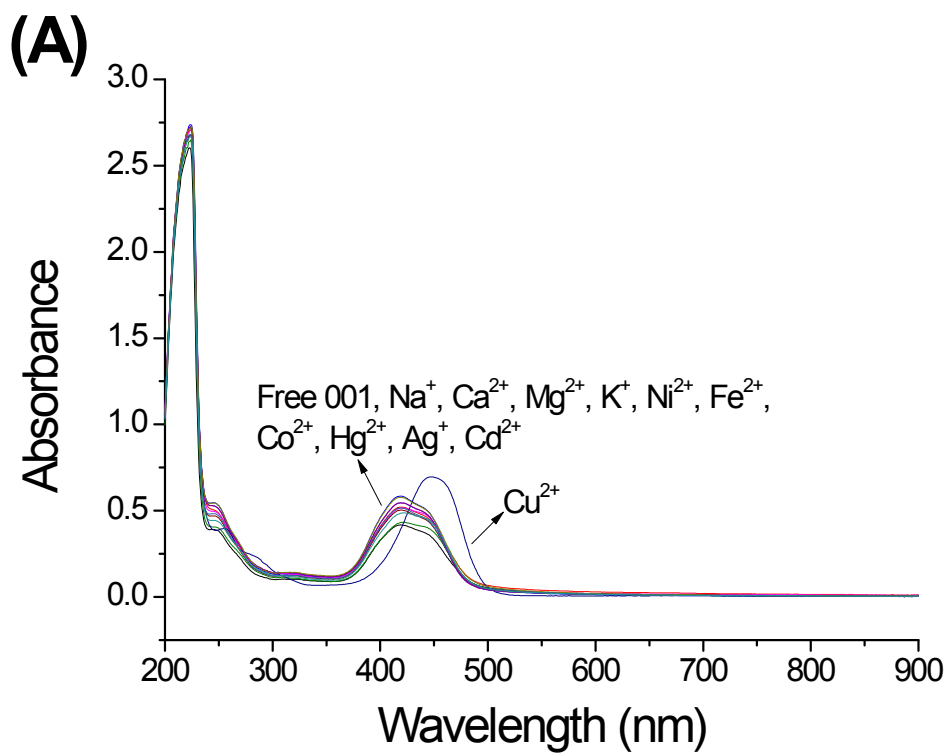


Fig. S1 UV-vis spectra of **FZU-06,001** (20 μ M) (A) or **FZU-06,002** (20 μ M) (B) with addition of chloride and nitrate salts of Na⁺, Ca²⁺, Mg²⁺, K⁺, Ni²⁺, Fe²⁺, Co²⁺, Hg²⁺, Ag⁺, Cu²⁺, Cd²⁺ at concentration of 200 μ M in HEPES buffer solutions (20 mM, pH 7.4).

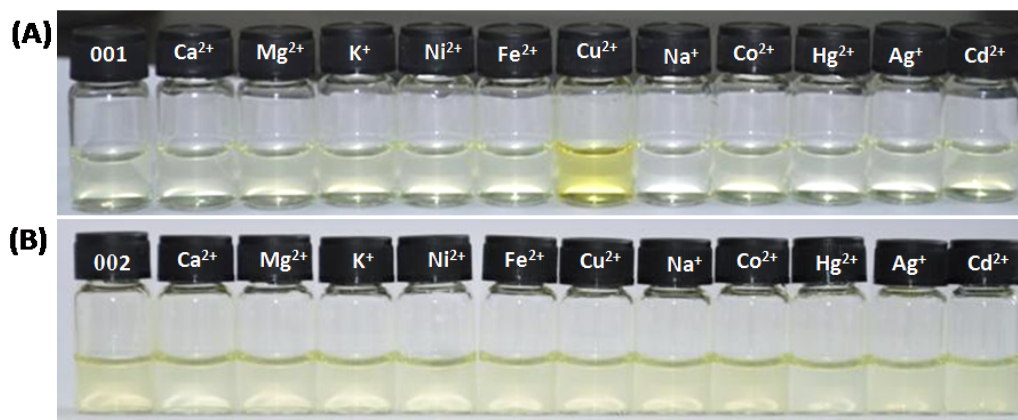


Fig. S2 Color changes of **FZU-06,001** (20 μ M) (A) or **FZU-06,002** (20 μ M) (B) with addition of chloride and nitrate salts of Na⁺, Ca²⁺, Mg²⁺, K⁺, Ni²⁺, Fe²⁺, Co²⁺, Hg²⁺, Ag⁺, Cu²⁺, Cd²⁺ at concentration of 200 μ M in HEPES buffer solutions (20 mM, pH 7.4).

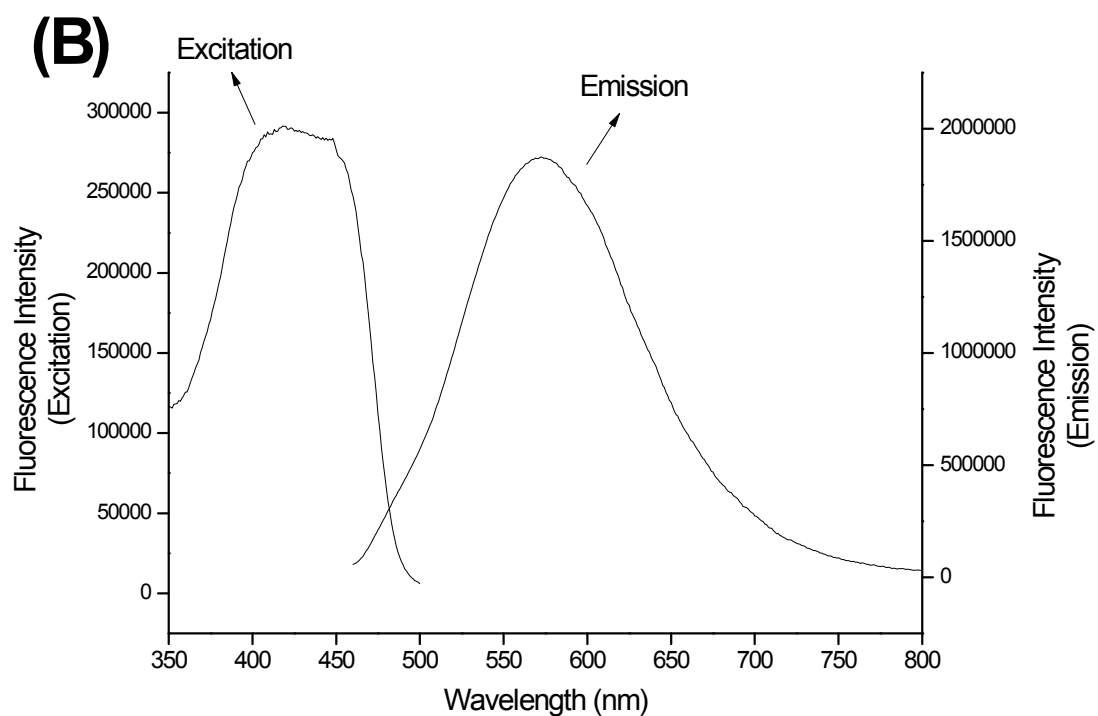
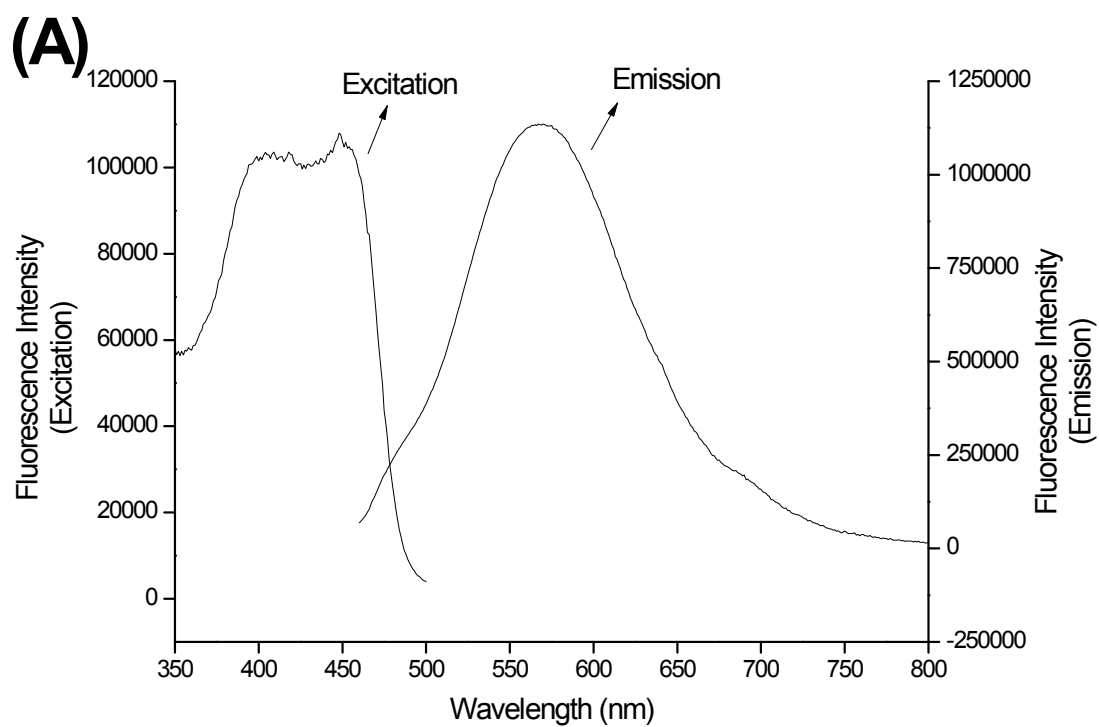
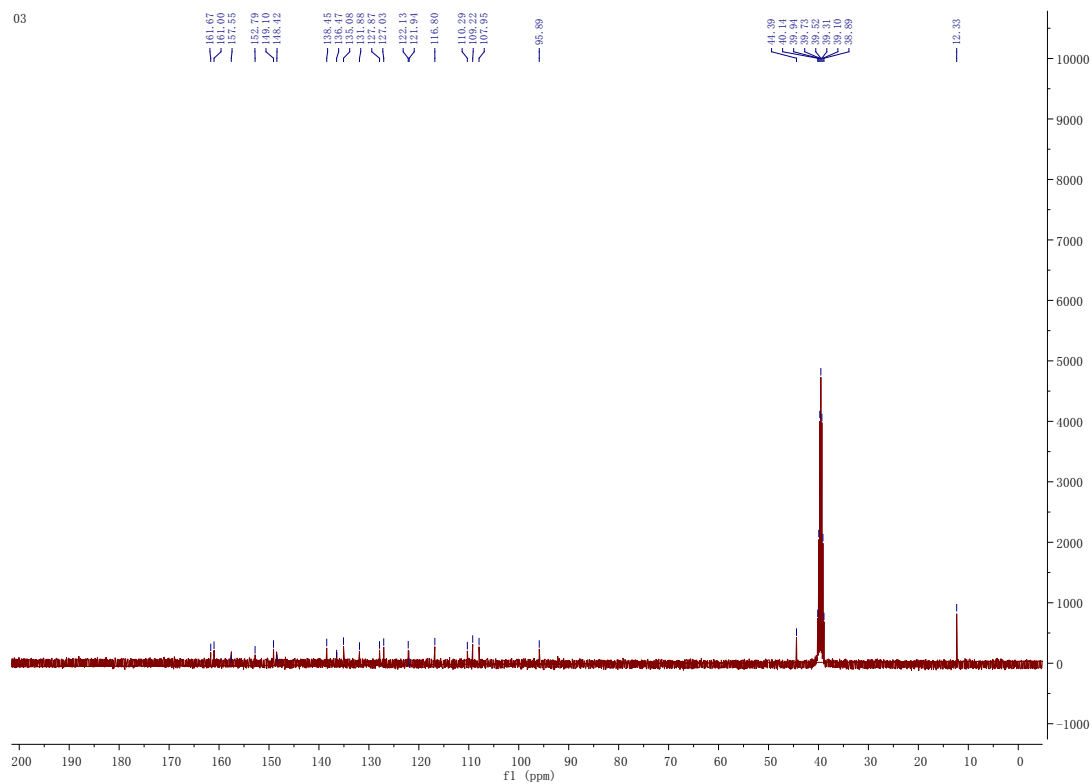
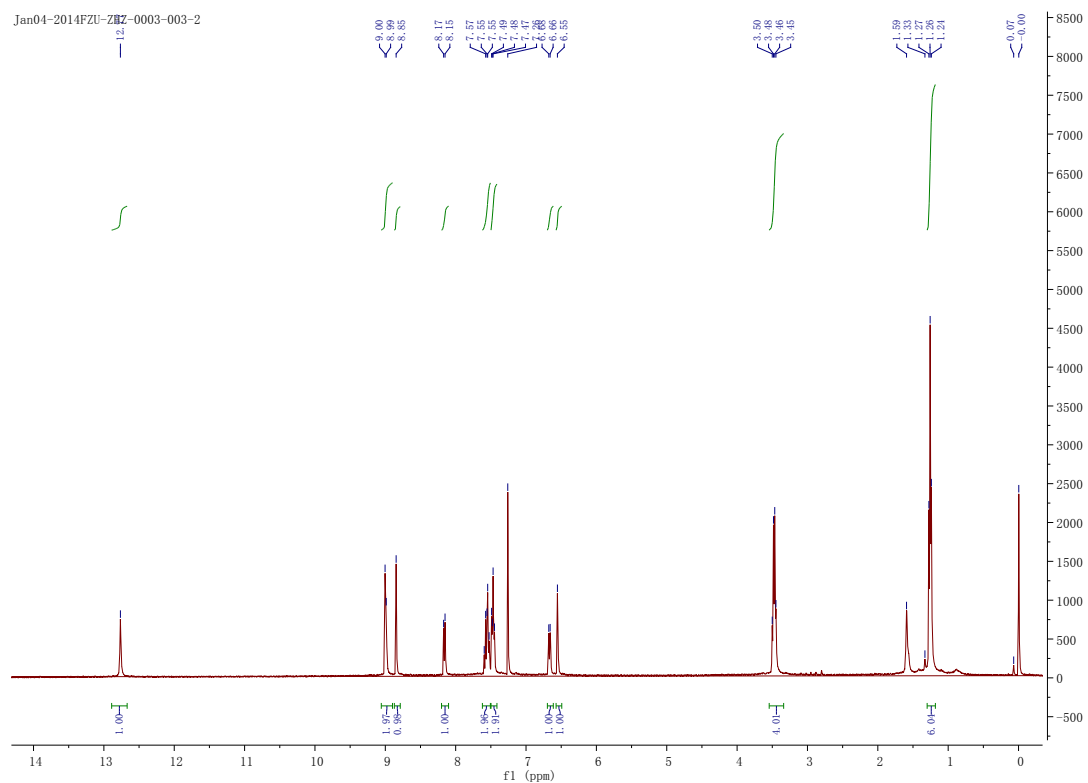


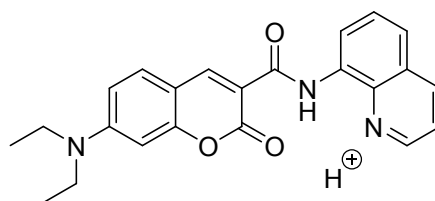
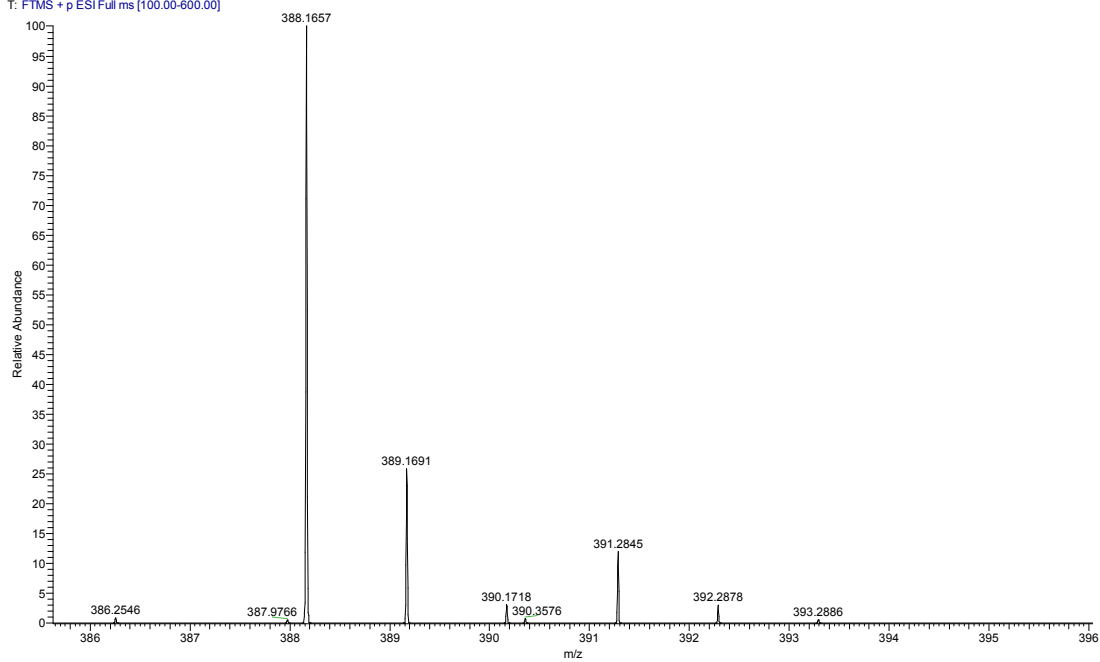
Fig. S3 Fluorescence excitation and emission spectrum of **FZU-06,001** (20 μM) (A) or **FZU-06,002** (20 μM) (B) at concentration of 200 μM in HEPES buffer solutions (20 mM, pH 7.4).

7-(Diethylamino)-2-oxo-*N*-(quinolin-8-yl)-2*H*-chromene-3-carboxamide (FZU-06,001)

Jan04-2014FZU-ZHZ-0003-003-2



ZHZ-003 #31 RT: 0.07 AV: 1 NL: 2.41E7
T: FTMS + p ESI Full ms [100.00-600.00]



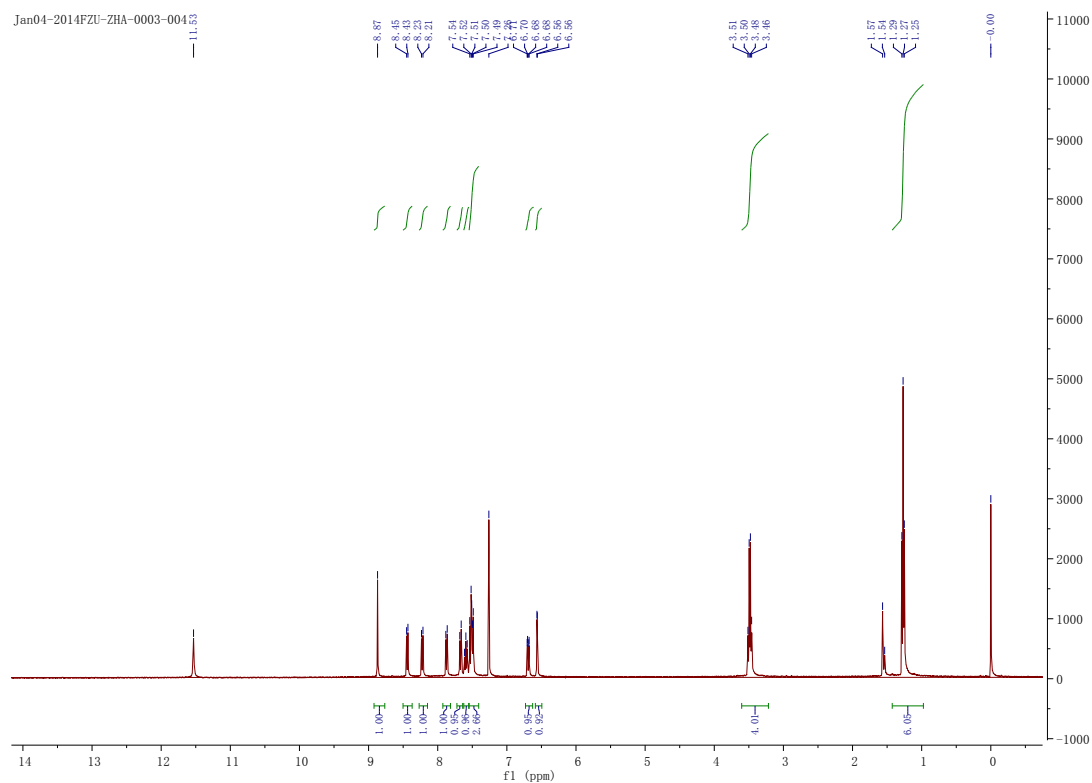
FZU-06,001

Chemical Formula: $C_{23}H_{22}N_3O_3^+$

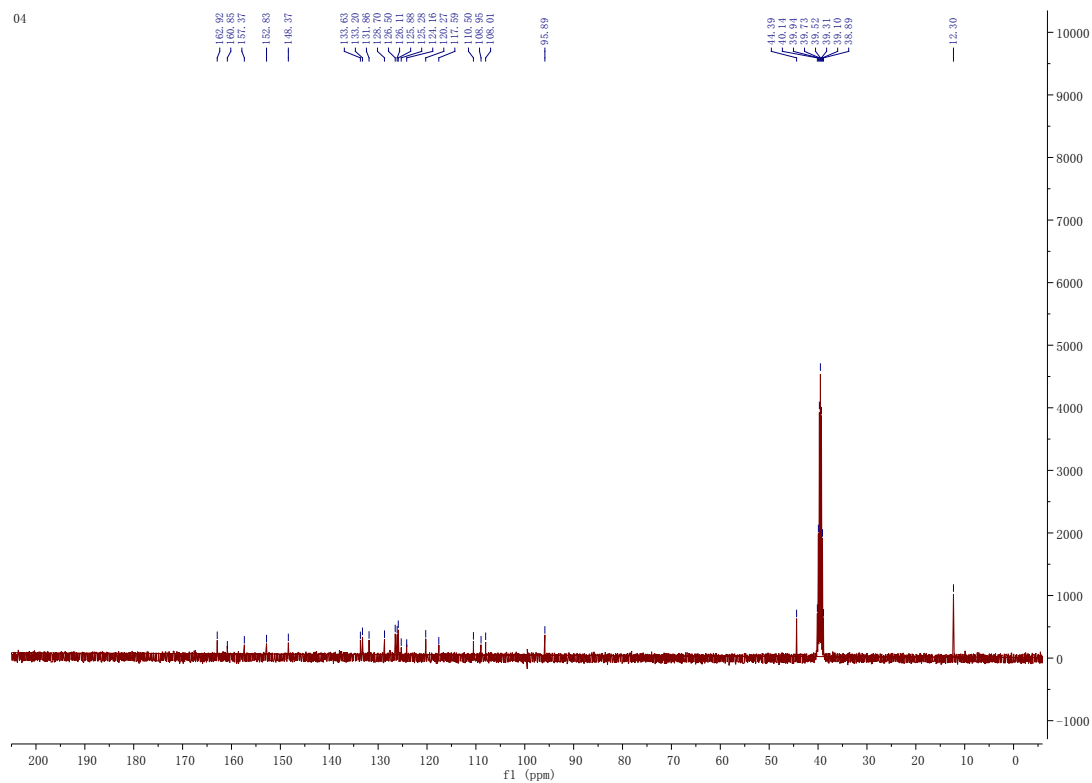
Exact Mass: 388.1656

7-(Diethylamino)-*N*-(naphthalen-1-yl)-2-oxo-2*H*-chromene-3-carboxamide (FZU-06,002)

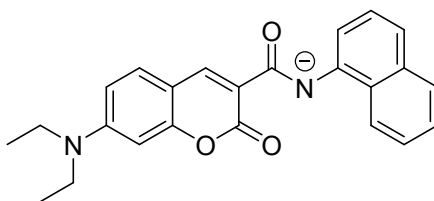
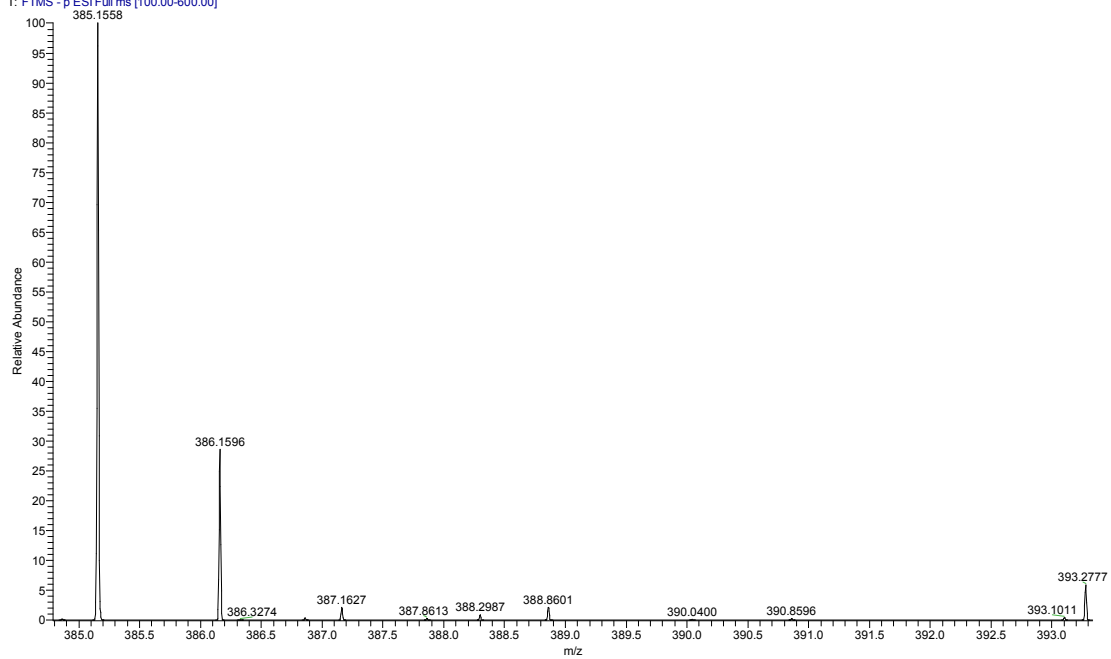
Jan04-2014FZU-ZHA-0003-004.53



04



ZHZ-004_140625143513 #6-16 RT: 0.01-0.04 AV: 11 NL: 1.78E6
T: FTMS - p ESI Full ms [100.00-600.00]



FZU-06,002

Chemical Formula: $C_{24}H_{21}N_2O_3^-$

Exact Mass: 385.1558