

[BACKGROUND]

Phthalocyanine based pigments are used for organic semiconductors and organic electroluminescence displays due to its clearness, high light stability, and durability. The chemical structure is difficult to analyze due to its larger molecular weight and lower solubility.

DART®-MS with ionRocket analysis provided the structural information concisely and rapidly. The analysis was done in atmospheric conditions, and without pre-treatment.

[SAMPLES] Titranyl phthalocyanine, Mmi 576.0927 Da, [M+H]⁺: 577.1003 Da.

[METHODS]

The ionRocket was directly connected to the DART®-MS. The sample was put on the POT and analyzed. The temperature was increased by 100°C per minute from 30°C to 600°C.

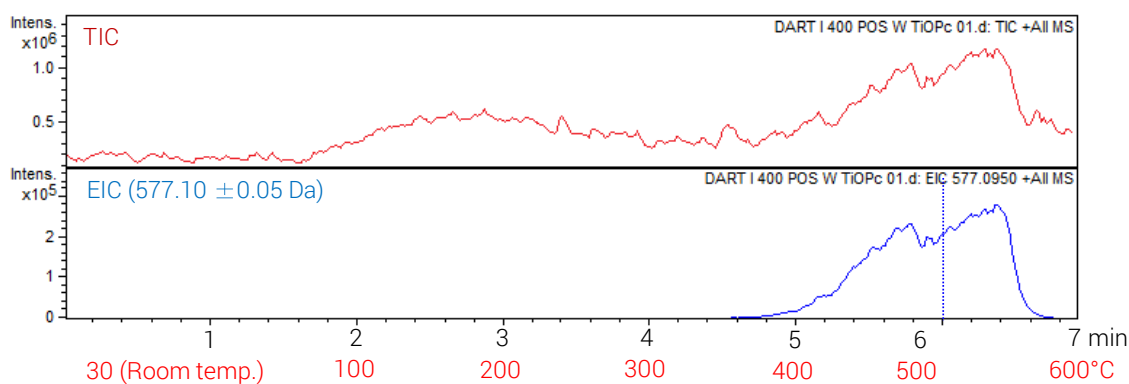
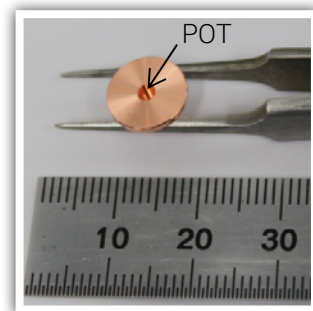


Fig.1 TIC and EIC of titranyl phthalocyanine
Room temperature 100°C/min 600°C

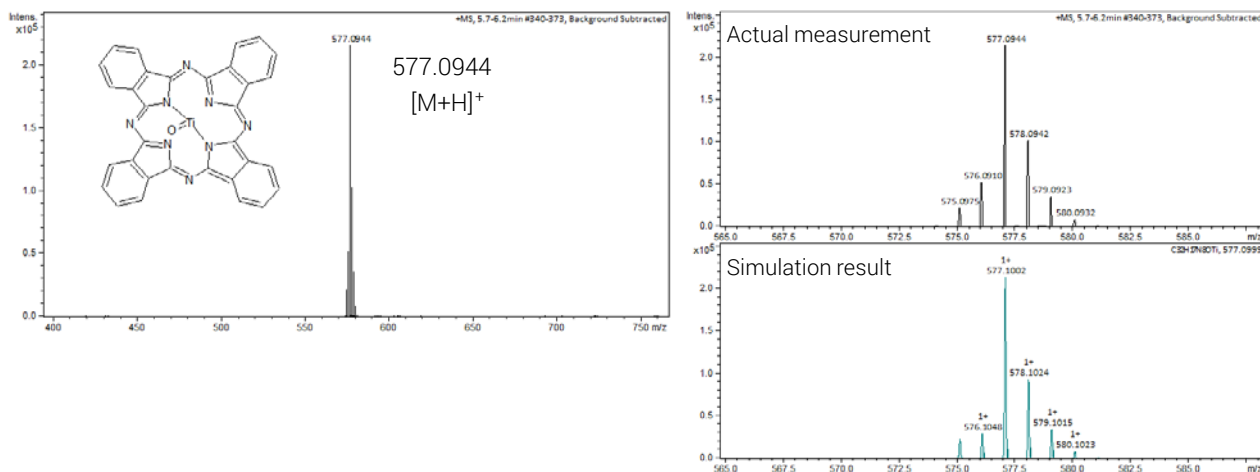


Fig. 2 DART®-MS spectrum of titranyl phthalocyanine at 500°C
DART®-SVP preset temperature: 400°C, ionization mode: DART® (+)

[TARGET] Chemical industry, material analysis, foreign substance analysis.