

A novel synthetic approach to 27-aryltetraporphyrins

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Experimental

Magnesium 27-(2-methylphenyl)tetraporphyrinate 1b: yield 6%. UV-VIS [THF, $\lambda_{\text{max}}/\text{nm}$ (I/I_{max}): 397 (0.516), 443 (0.249), 595 (0.229), 620 (0.237), 647 (0.860), 670 (1.000). ^1H NMR (DMSO- d_6) δ : 9.41–9.53 (m, 6H, $\beta^1\text{-H}_{\text{Ar}}$, $\beta^2\text{-H}_{\text{Ar}}$), 8.17 (m, 4H, $\gamma^1\text{-H}_{\text{Ar}}$), 7.96–8.03 (m, 6H, $\gamma^2\text{-H}_{\text{Ar}}$, $\text{H}_{\text{o-Tol}}$), 7.69 (t, 2H, $\gamma^3\text{-H}_{\text{Ar}}$, J 7.5 Hz), 7.05 (d, 2H, $\beta^3\text{-H}_{\text{Ar}}$, J 8.1 Hz), 1.98 (s, 3H, H_{Me}). MS (MALDI-TOF), m/z : 626 [M^+].

Magnesium 27-(4-methylphenyl)tetraporphyrinate 1d: yield 4%. UV-VIS [THF, $\lambda_{\text{max}}/\text{nm}$ (I/I_{max}): 397 (0.478), 444 (0.210), 595 (0.192), 620 (0.216), 648 (0.664), 670 (1.000). ^1H NMR (DMSO- d_6) δ : 9.32–9.65 (m, 6H, $\beta^1\text{-H}_{\text{Ar}}$, $\beta^2\text{-H}_{\text{Ar}}$), 8.27 (m, 4H, $\gamma^1\text{-H}_{\text{Ar}}$), 7.77–8.14 (m, 6H, $\gamma^2\text{-H}_{\text{Ar}}$, $\text{H}_{\text{p-Tol}}$), 7.68 (t, 2H, $\gamma^3\text{-H}_{\text{Ar}}$, J 7.5 Hz), 7.05 (d, 2H, $\beta^3\text{-H}_{\text{Ar}}$, J 8.1 Hz), 2.85 (s, 3H, H_{Me}). MS (MALDI-TOF), m/z : 626 [M^+].

Magnesium 27-(4-methoxyphenyl)tetraporphyrinate 1e: yield 3%. UV-VIS [THF, $\lambda_{\text{max}}/\text{nm}$ (I/I_{max}): 398 (0.480), 444 (0.238), 595 (0.176), 618 (0.177), 648 (0.668), 670 (1.000). ^1H NMR (DMSO- d_6) δ : 9.30–9.64 (m, 6H, $\beta^1\text{-H}_{\text{Ar}}$, $\beta^2\text{-H}_{\text{Ar}}$), 8.23 (m, 4H, $\gamma^1\text{-H}_{\text{Ar}}$), 7.90–8.10 (m, 4H, $\gamma^2\text{-H}_{\text{Ar}}$, $\text{H}_{\text{p-Anisyl}}$), 7.68 (t, 2H, $\gamma^3\text{-H}_{\text{Ar}}$, J 7.5 Hz), 7.56 (d, 2H, $\text{H}_{\text{p-Anisyl}}$, J 8.3 Hz), 7.08 (d, 2H, $\beta^3\text{-H}_{\text{Ar}}$, J 8.1 Hz), 4.16 (s, 3H, H_{Me}). MS (MALDI-TOF), m/z : 642 [M^+].

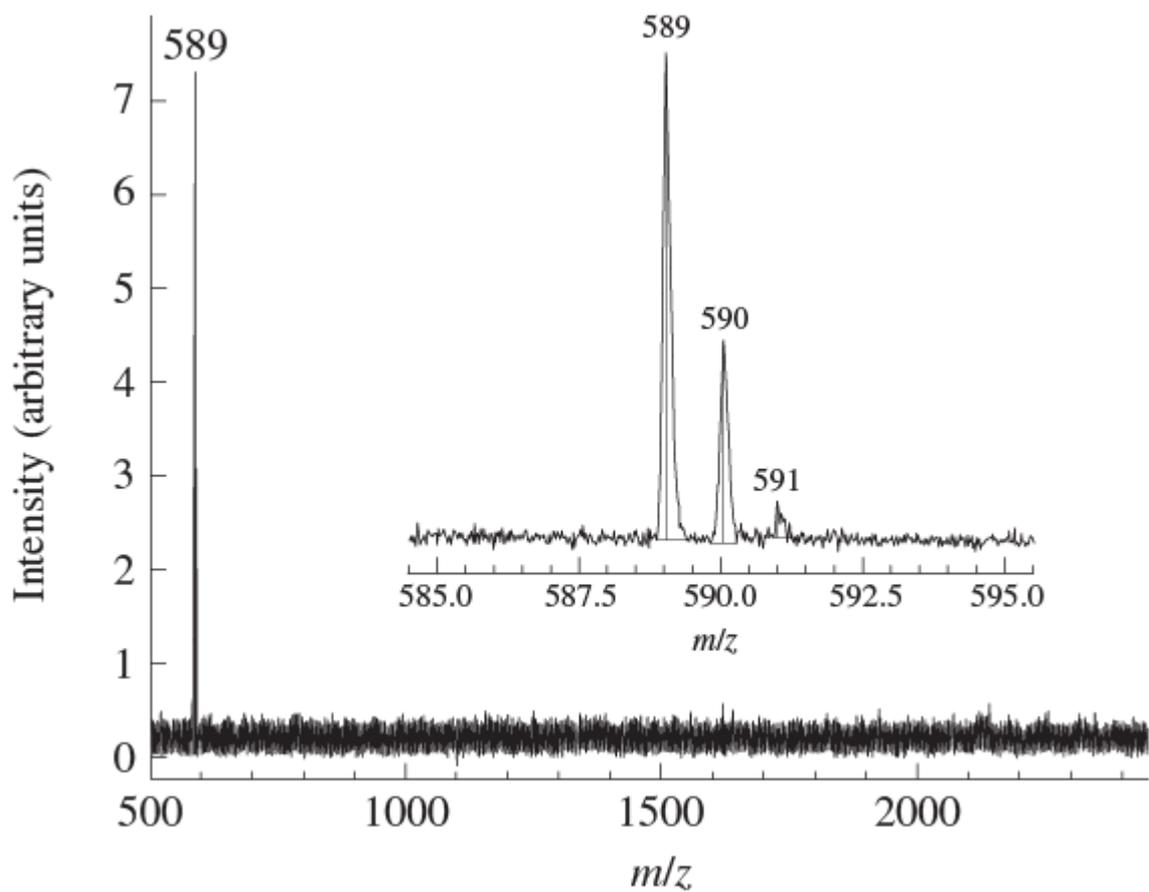


Figure 1S MALDI-TOF spectrum of compound **2a** and isotopic pattern for the molecular ion (inset).