**†Electronic Supplementary Information (ESI) available:** [NMR <sup>1</sup>H and <sup>19</sup>F, FTIR, HRMS and UV-vis of the free-base porphyrins P2-P6. UV-vis, MALDI(TOF/TOF) and HRMS of the metalloporphyrins.

## Glycol metalloporphyrin derivatives in solution or immobilized on LDH and silica: synthesis, characterization and catalytic features in oxidation reactions

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**Figure S1.** NMR spectra of porphyrin **P2**:  ${}^{1}$ H (a) and  ${}^{19}$ F (b).

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**Figure S2.** NMR spectra of porphyrin **P3**:  ${}^{1}$ H (a) and  ${}^{19}$ F (b).





**Figure S3.** NMR spectra of porphyrin **P4**:  ${}^{1}$ H (a) and  ${}^{19}$ F (b).



**Figure S4.** NMR spectra of porphyrin **P5**:  ${}^{1}$ H (a) and  ${}^{19}$ F (b).



(a)

**Figure S5.** NMR spectra of porphyrin **P6**:  ${}^{1}$ H (a) and  ${}^{19}$ F (b).



**Figure S6.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin **P2**.



**Figure S7.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin P3.



**Figure S8.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin P4.



**Figure S9.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin **P5**.



**Figure S10.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin **P6**.



**Figure S11.** UV-vis spectra of porphyrins (**P2-P6**) in CH<sub>2</sub>Cl<sub>2</sub>: (a) Porphyrin **P2**, (b) Porphyrin **P3**, (c) Porphyrin **P4**, (d) Porphyrin **P5**, and (e) Porphyrin **P6**.



Figure S12. FTIR spectra of porphyrins (P1- P6): (a) Porphyrin P1, (b) Porphyrin P2, (c) Porphyrin P3, (d) Porphyrin P4, (e) Porphyrin P5, and (f) Porphyrin P6.



Figure S13. UV-Vis spectra in methanol: (a) P2, (b) MnP9, and (c) FeP7 (350-700 nm).



Figure S14. UV-vis spectra in methanol: (a) P2, (b) FeP7, and (c) MnP9 (amplification).



**Figure S15.** UV-Vis spectra in methanol: (a) **P6**, (b) **MnP10**, and (c) **FeP8** (300-600 nm).



**Figure S16.** UV-Vis spectra in methanol: (a) **P6**, (b) **MnP10**, and (c) **FeP8** (450-700 nm).



**Figure S17.** Matrix-Assisted Laser. Desorption Ionization – Time of Flight (MALDI-TOF/TOF) mass spectra - porphyrin **FeP7**.



**Figure S18.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin **FeP8**.



**Figure S19.** High-resolution mass spectra (FAB<sup>+</sup>) - porphyrin **MnP9**.



Figure S20. High-resolution mass spectra (FAB+) - porphyrin MnP10.