Fabrication and analysis of dye-sensitized solar cells (DSSCs) using porphyrin dyes with catechol anchoring group

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1H NMR of tetrakis dihydroxyphenyl porphyrins
1H NMR
2,4-ATHPP
$^{13}C\{H\} NMR of Zn2,3TDHPP
$^{13}$C{H} NMR of Zn3,4TDHPP