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Adsorption of Functionalized Porphyrins on Oxide Particles: Influence of Anchor Position and Metal

- Supporting Information -

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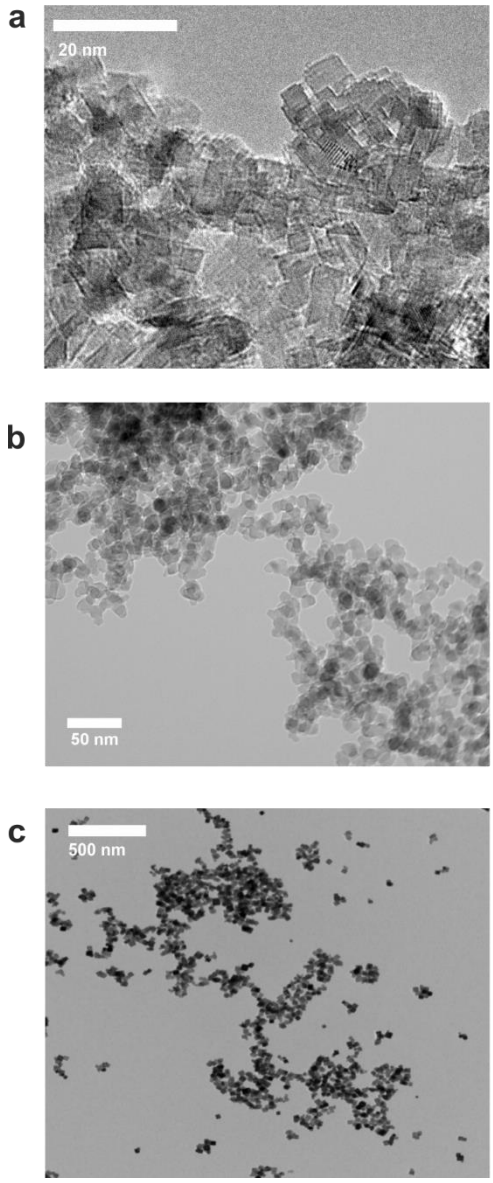

Figure S1: TEM micrographs of MgO nanocubes (a), TiO_2 nanoparticles (b) and Co_3O_4 nanocubes (c).

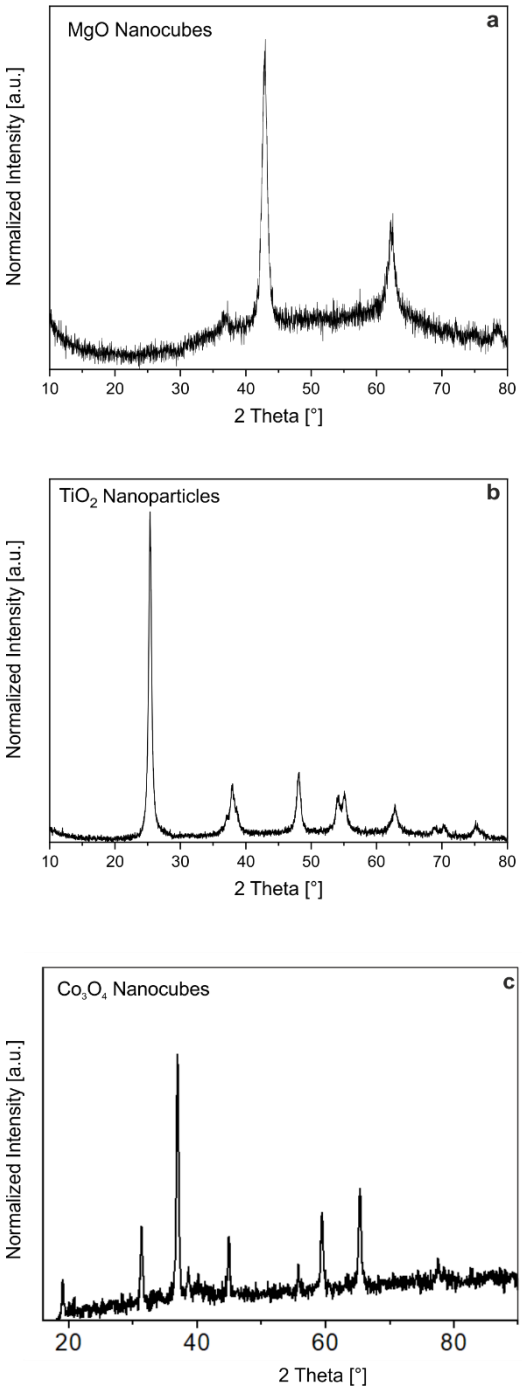

Figure S2: XRD spectra of MgO nanocubes (a), TiO_2 nanoparticles (b) and Co_3O_4 nanocubes (c). (a) adapted with permission from J. Schneider, F. Kollhoff, J. Bernardi, A. Kaftan, J. Libuda, T. Berger, M. Laurin and O. Diwald, *ACS applied materials & interfaces*, 2015, **7**, 22962-22969. Copyright 2015 American Chemical Society. Micrograph (b) adapted with permission from J. Schneider, T. Berger and O. Diwald, *ACS applied materials & interfaces*, 2018. Copyright 2018 American Chemical Society.

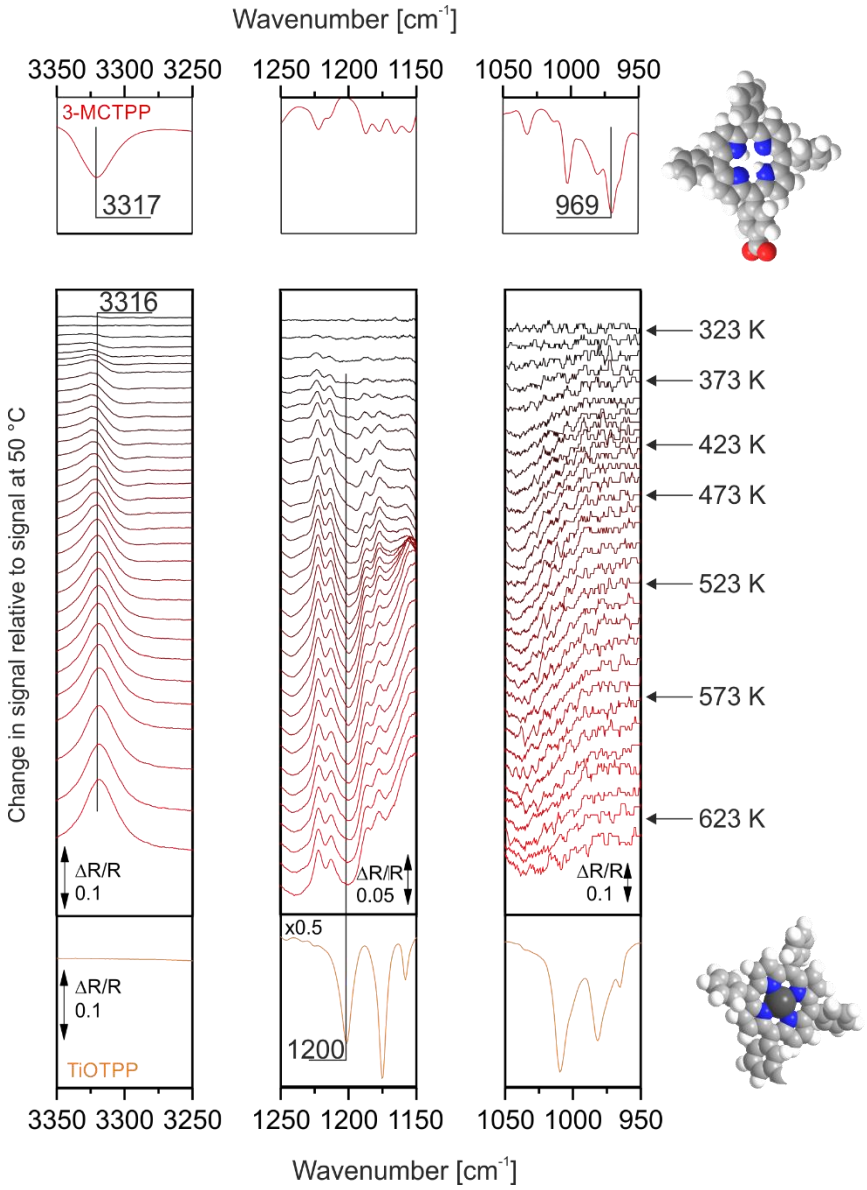

Figure S3: Temperature-programmed DRIFT spectra for 4-MCTPP adsorbed on TiO_2 nanoparticles during heating. In addition, we show DRIFT spectra of free-base 3-MCTPP (top panels) and the respective metal-centered porphyrins (bottom panels)

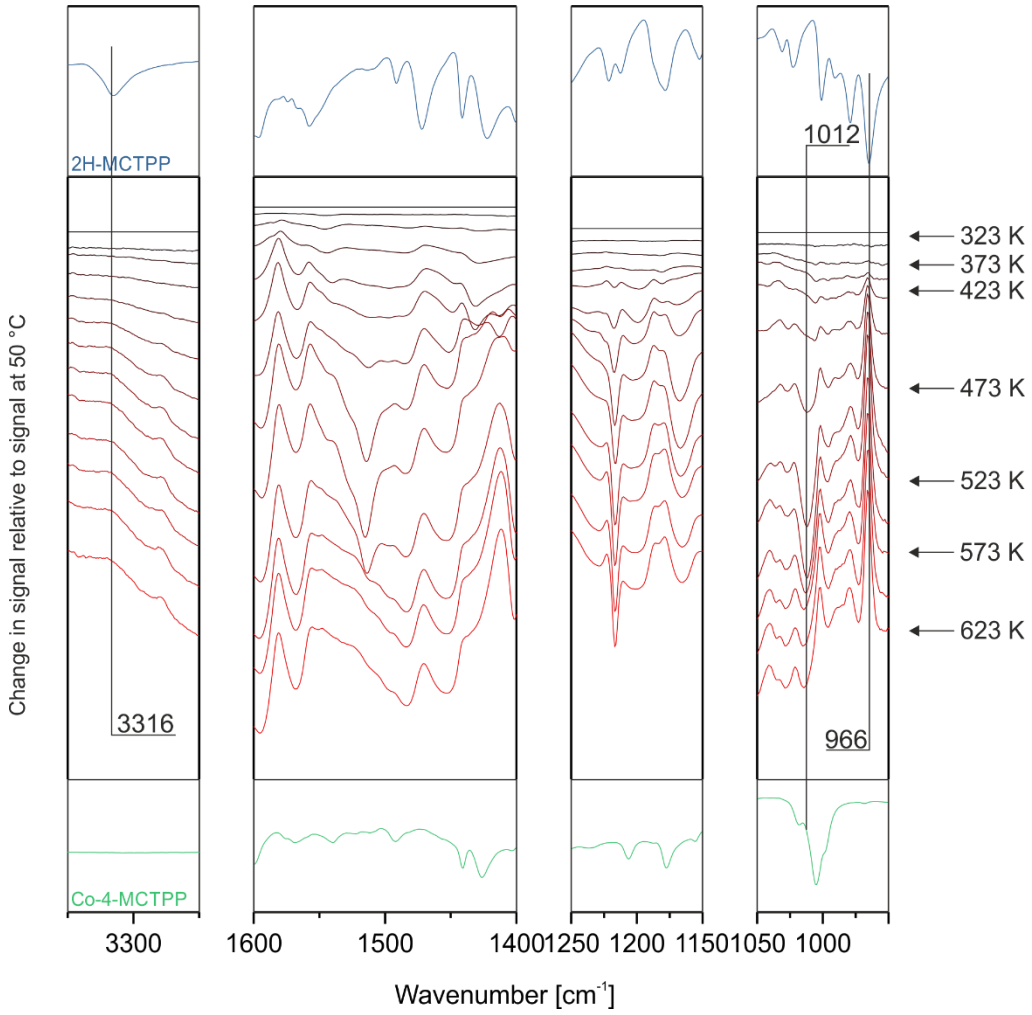

Figure S4: Temperature-programmed DRIFT spectra for 4-MCTPP adsorbed on Co_3O_4 nanocubes during heating. In addition, we show DRIFT spectra of free-base 3-MCTPP (top panels) and the respective metal-centered porphyrins (bottom panels)

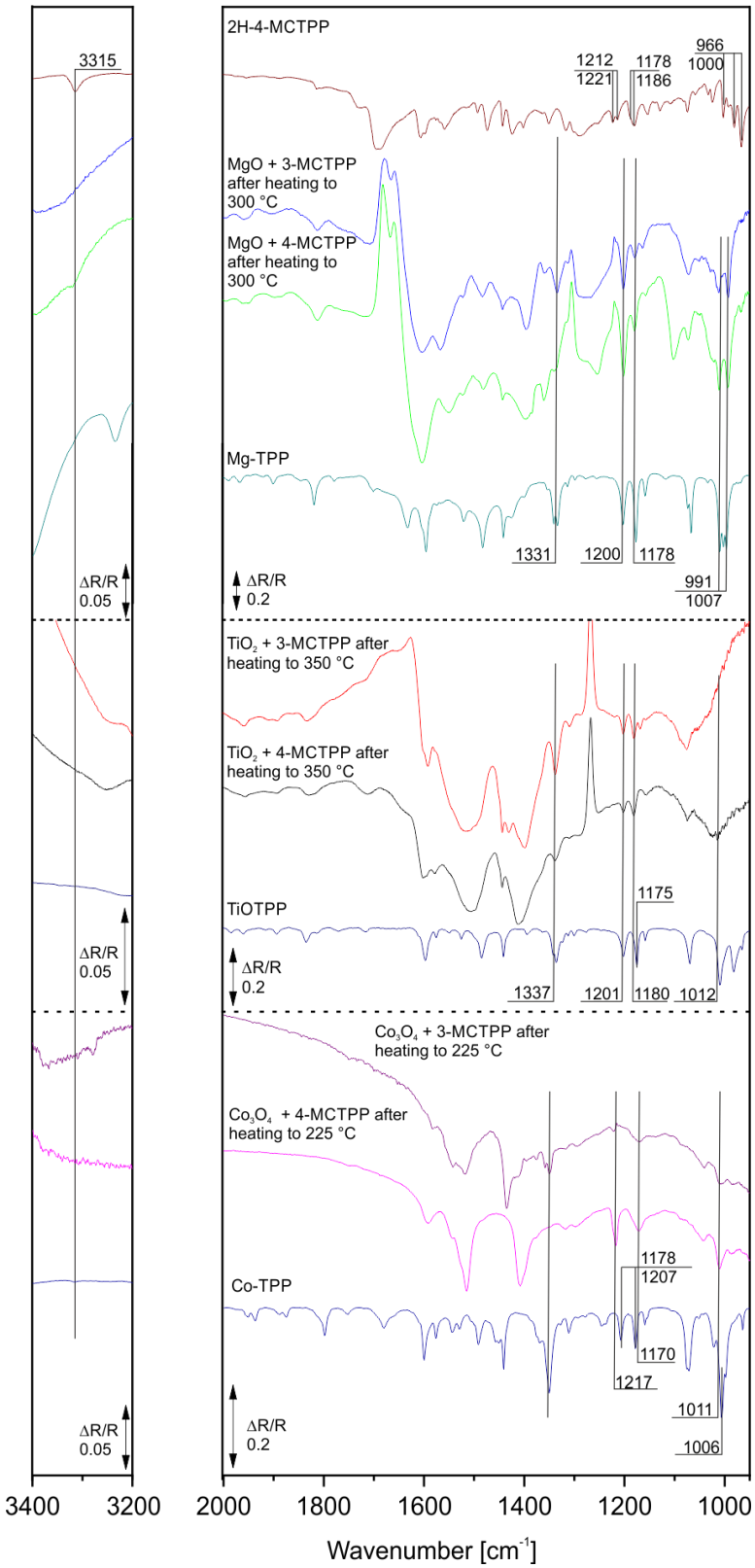

Figure S5: DRIFTS spectra of samples after heat treatment to respective temperatures with reference spectra of respective metal centered porphyrins (bottom spectra in each section) and of free-base 2H-4-MCTPP (top spectrum)

References:

[1] J. Schneider, F. Kollhoff, J. Bernardi, A. Kaftan, J. Libuda, T. Berger, M. Laurin and O. Diwald, *ACS applied materials & interfaces*, 2015, **7**, 22962-22969.

[2] J. Schneider, T. Berger and O. Diwald, *ACS applied materials & interfaces*, 2018.