Supplementary data for the article:

Ilić, I.; Milutinović-Nikolić, A.; Mojović, Z.; Vuković, Z.; Vulić, P.; Gržetić, I.; Banković, P.; Jović-Jovičić, N. Oxidative Degradation of Aromatic N-Compounds Using Cobalt Containing Montmorillonite-Based Catalysts. *Applied Clay Science* **2020**, *193*, 105668. https://doi.org/10.1016/j.clay.2020.105668

Supplementary data

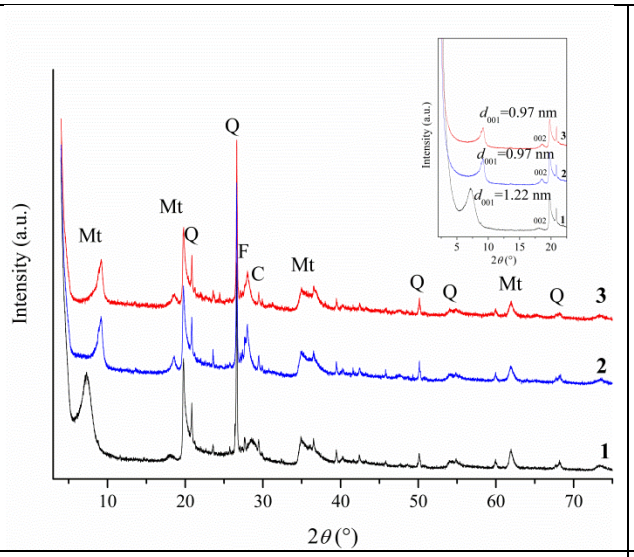


Fig. S1a

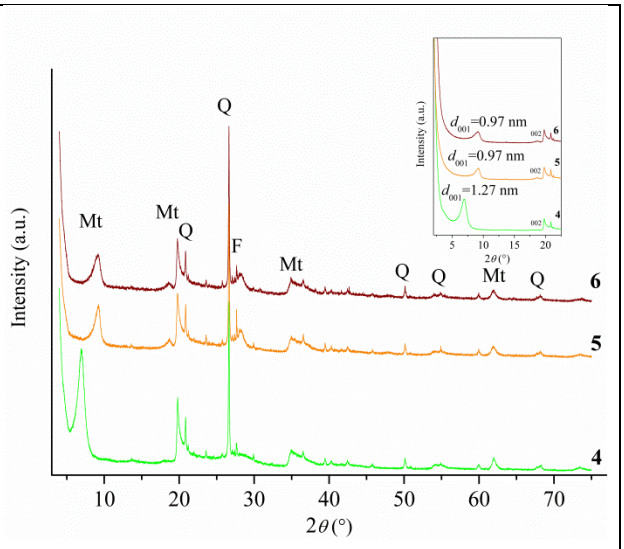


Fig. S1b

Fig. S1. X-ray diffractograms of investigated samples: a) series based on Mt (1) - Mt, (2) - 0.5Co/Mt, (3) - 1.0Co/Mt and b) series based on Mt_A (4) - Mt_A, (5) - 0.5Co/Mt_A, (6) - 1.0Co/Mt_A. Where: Mt-montmorillonite, Q-quartz, C-calcite and F-feldspar

In the inserted Figures lower scanning rate was applied in order for the change in d_{001} value to be emphasized.

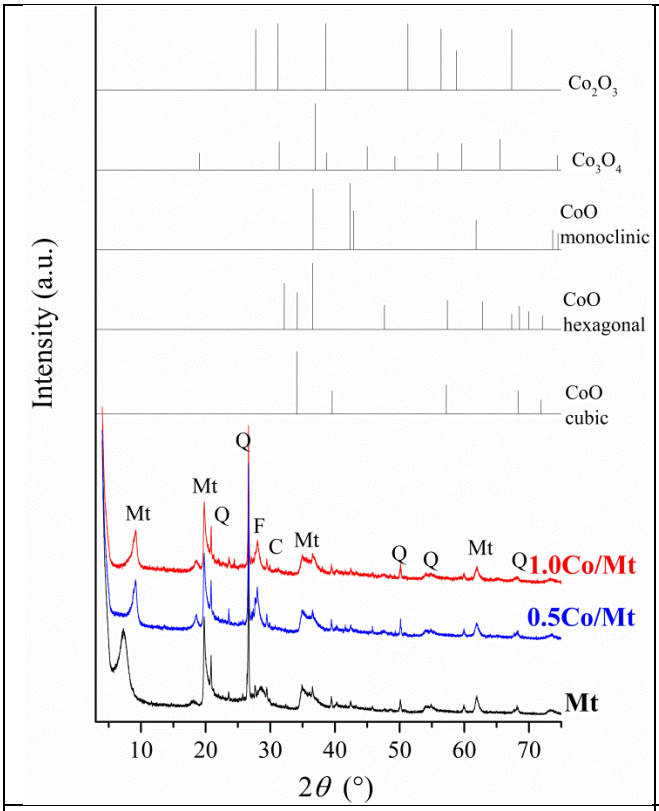


Fig. S2a

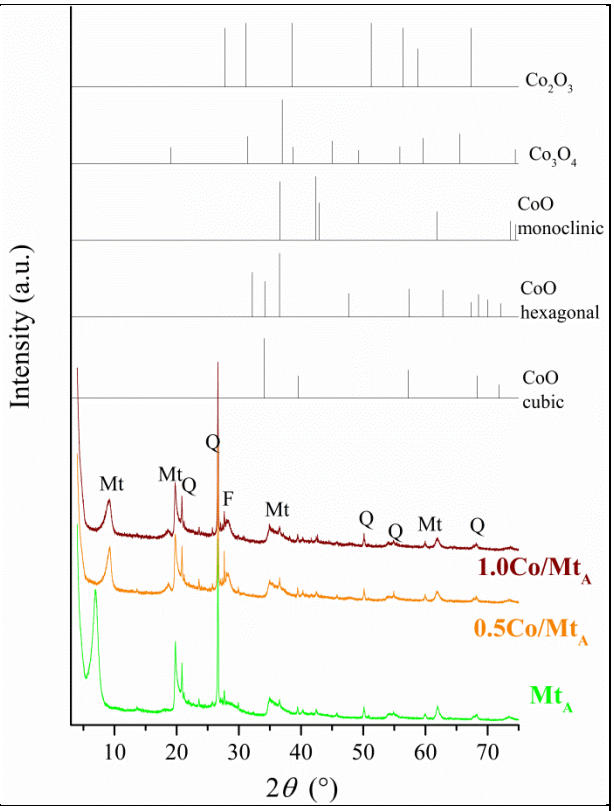


Fig. S2b

Fig. S2. X-ray diffractograms of investigated samples: a) series based on Mt and b) series based on Mt_A along with theoretical spectra of cobalt oxides.

Phases and JCPDS cards numbers: Mt-montmorillonite (29-1498); Q-quartz (89-8934); C-calcite (72-1937), F-feldspar (89-1462, 89-8564, 89-8572); CoO cubic (75-0419); CoO monoclinic (72-1474); CoO hexagonal (89-2823); Co_3O_4 (65-3103) and C_2O_3 (02-0770)

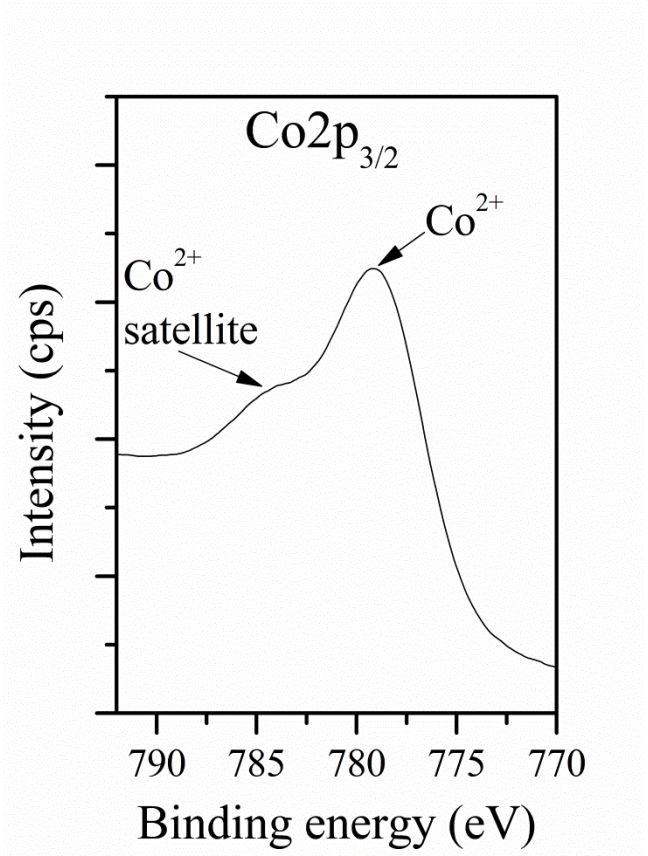
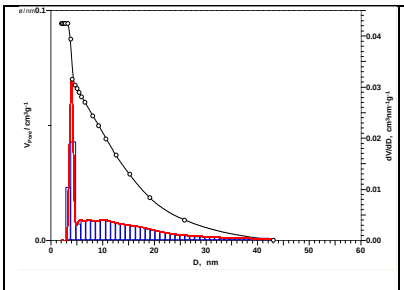
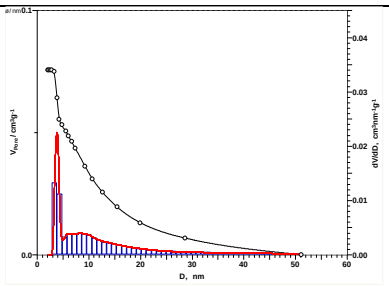


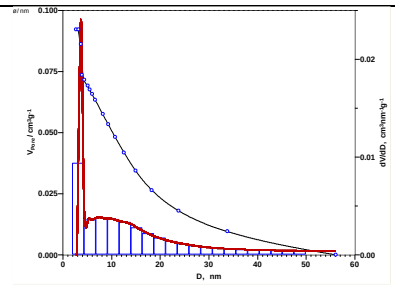
Fig. S3. XPS spectrum of 1.0Co/Mt_A



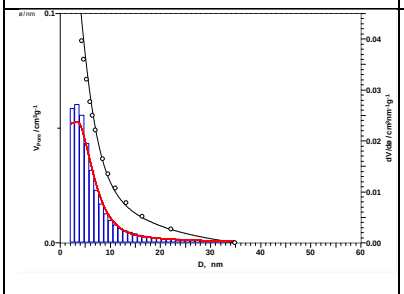
S4a. Mt



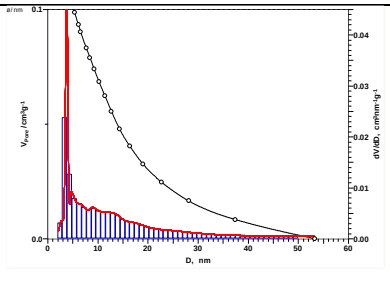
S4b. 0.5Co/Mt



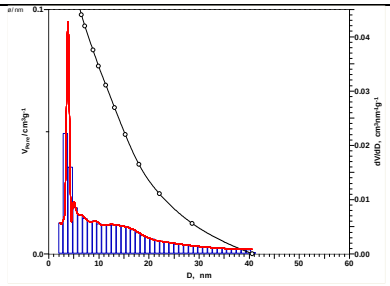
S4c. 1.0Co/Mt



S4d. Mt_A

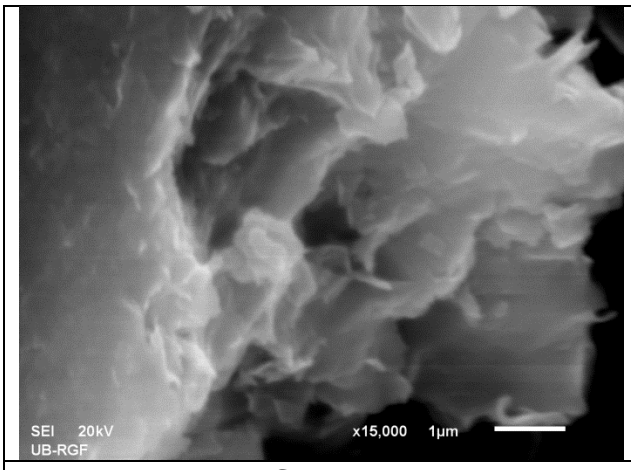


S4e. 0.5Co/Mt_A

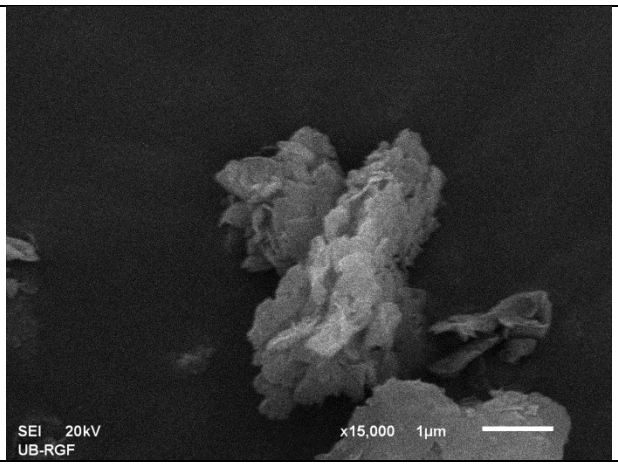


S4f. 1.0Co/Mt_A

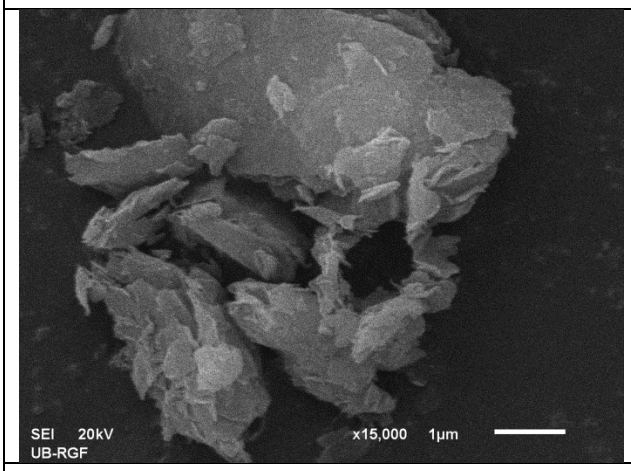
Fig. S4. Mesopore diameter distribution curves were obtained according to the Barrett, Joyner, Halenda method. Calculations were based on the Desorption Branch in the p/p_0 range from 0.3 to 0.96 using standard isotherm: Universal (Harkins, Jura) from literature: ASTM Standards Designation: D 4641-87



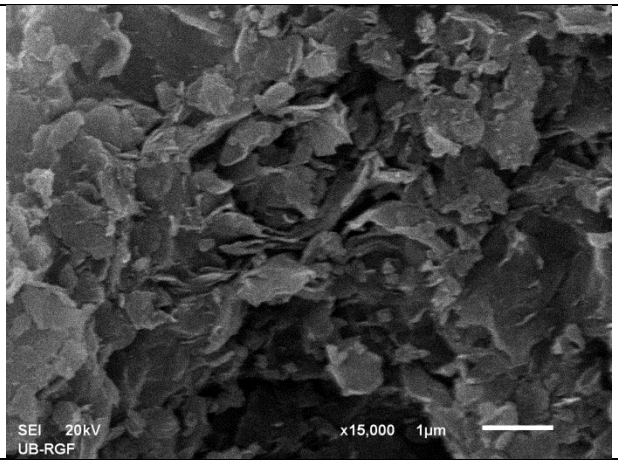
S5a. Mt



S5b. Mt_A

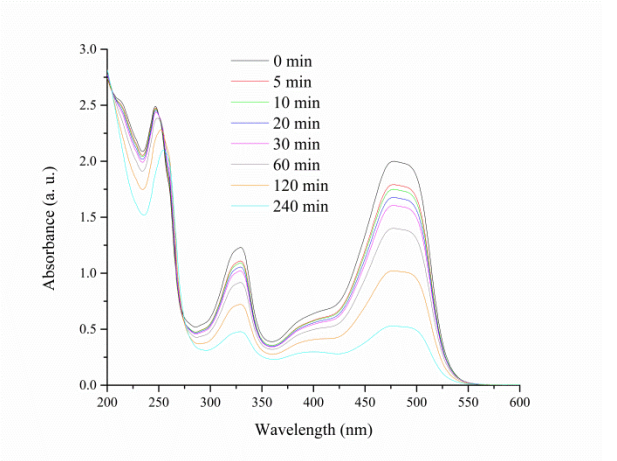


S5c. 1.0Co/Mt

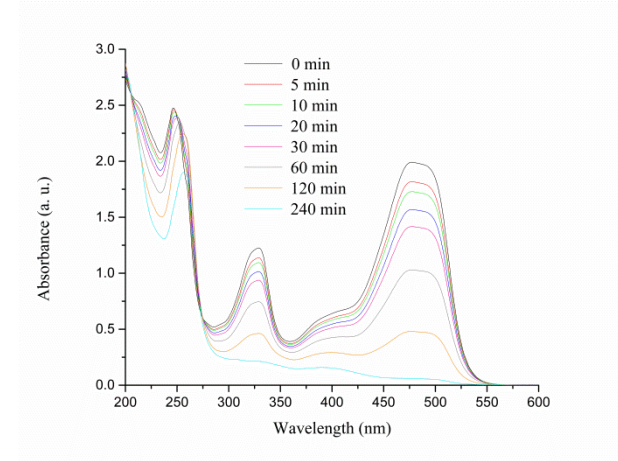


S5d. 1.0Co/Mt_A

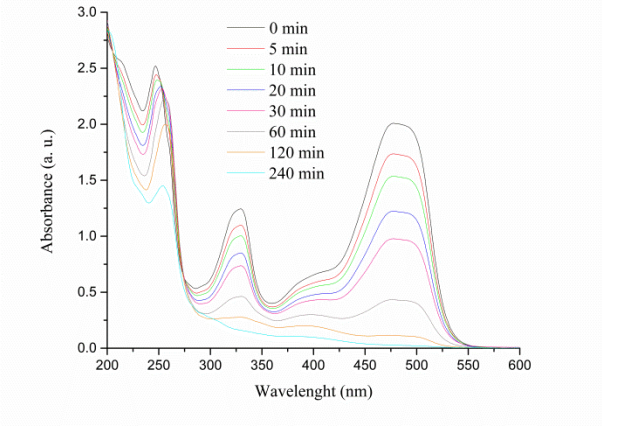
Fig. S5. SEM microphotographs of investigated samples



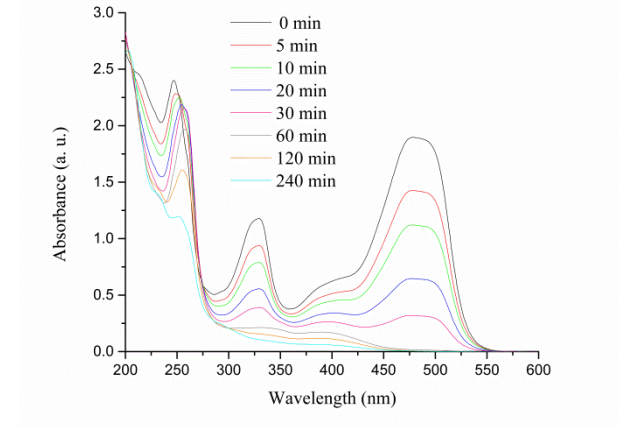
S6a. 1.0Co/Mt at 30°C



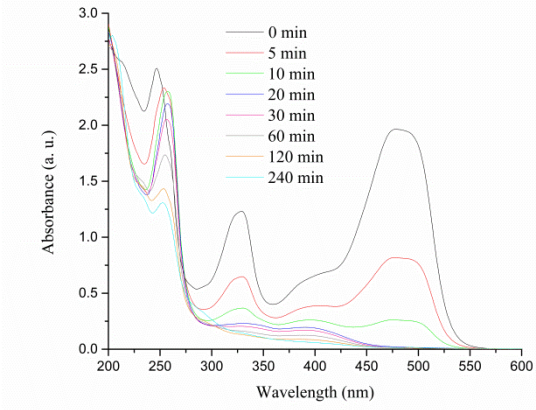
S6b. 1.0Co/Mt_A at 30°C



S6c. 1.0Co/Mt_A at 40°C



S6d. 1.0Co/Mt_A at 50°C



S6e. 1.0Co/Mt_A at 60°C

Fig. S6. UV-Vis spectra for AO10 degradation with respect to contact time
- for different catalysts at 30 °C (S6a and S6b); and
- for 1.0Co/Mt_A in 30 °C- 60°C temperature range (S6b – S6e).

Web references

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Sigma Aldrich catalog (https://www.sigmaaldrich.com/catalog/substance/orangeg4523719 3615811?lang=en&region=SX ; last accessed March 2020).

The Clay Mineral society (http://www.clays.org/sourceclays_data.html; last accessed March 2020).