Electronic Supplementary Information

Room-temperature synthesis of Fe-BTC from layered iron hydroxides: influence of precursor organisation

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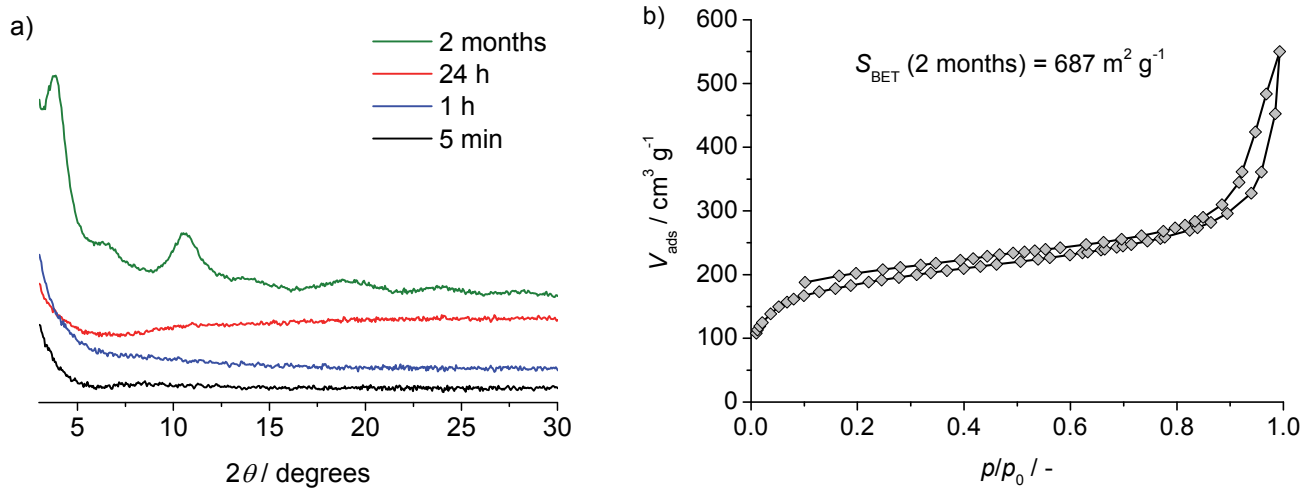

Fig. SI1 X-ray diffraction patterns of a preliminary Fe-BTC synthesis with molar composition 0.8 NaOH : 0.21 Na_2SO_4 : 1 Fe : 1.5 TA: 92 EtOH : 30 H_2O and b) nitrogen isotherm of the resulting product.

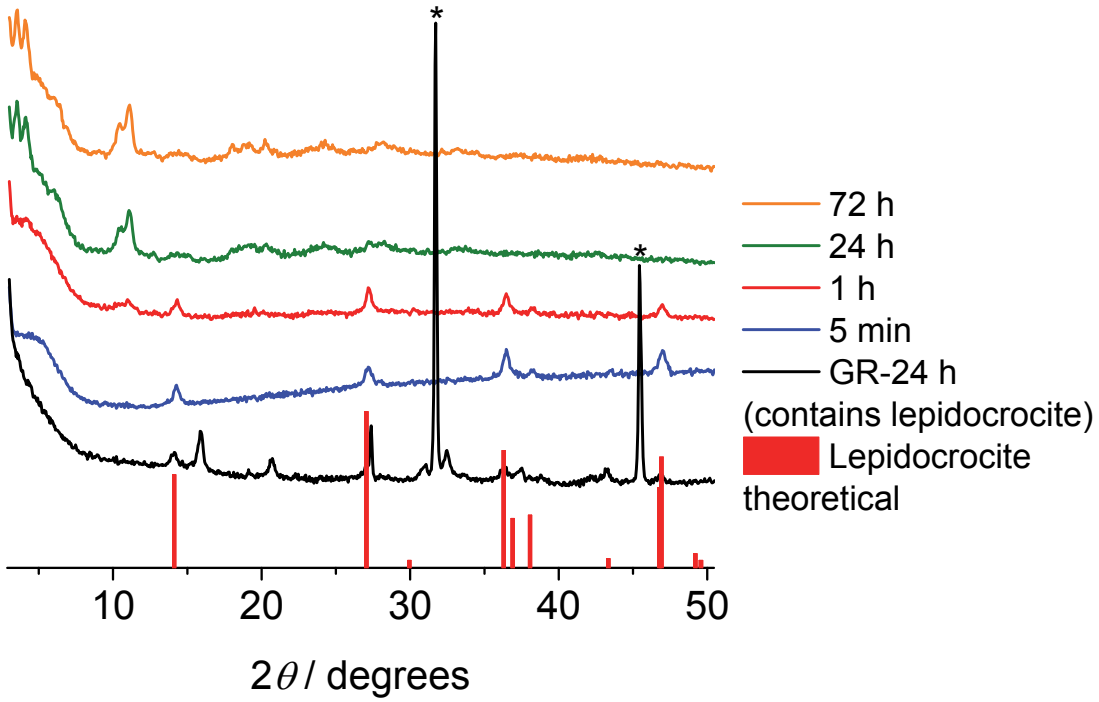

Fig. SI2 X-ray diffraction patterns of Fe-BTC syntheses with starting green rust (GR) precursor containing lepidocrocite after different synthesis times. Asterisks mark soluble side phase formed during isolation by freeze drying.

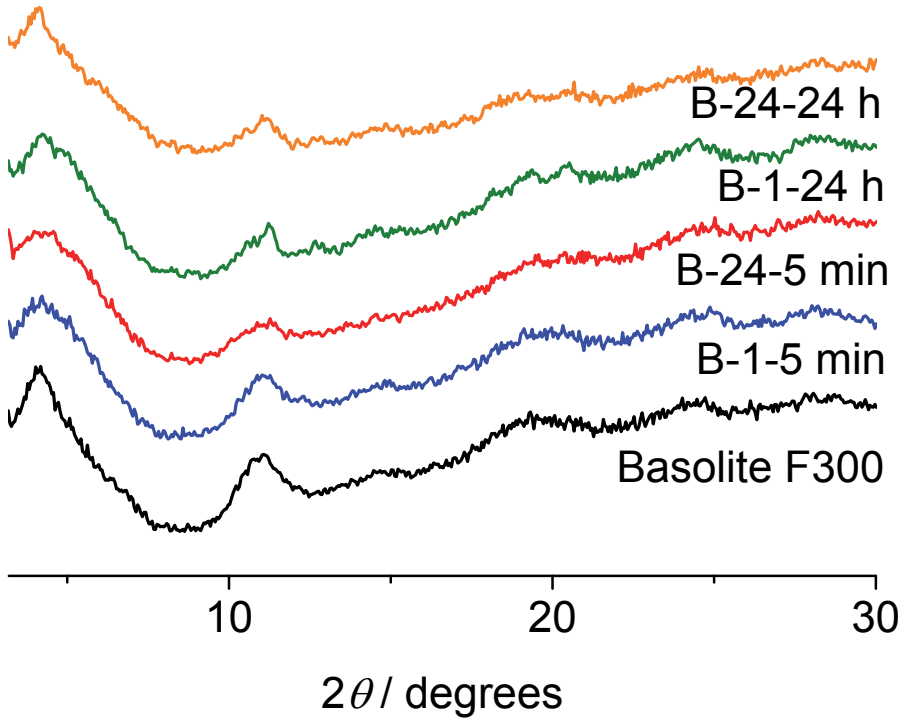

Fig. SI3 X-ray diffraction patterns of samples B synthesised with GR after different aging times.

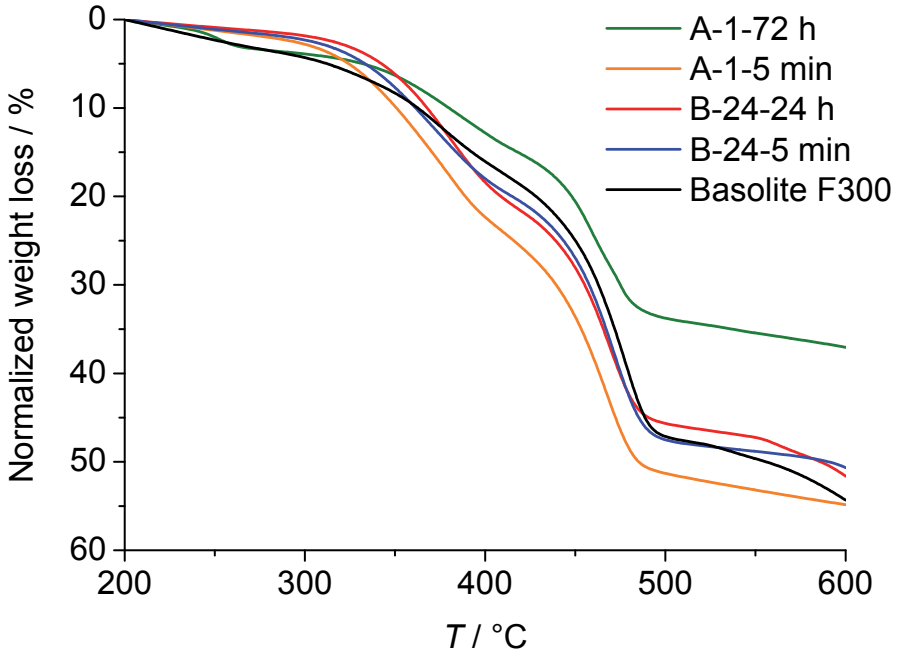

Fig. SI4 Thermogravimetric profiles in air of Fe-BTC samples A with after different synthesis times and Basolite F300.

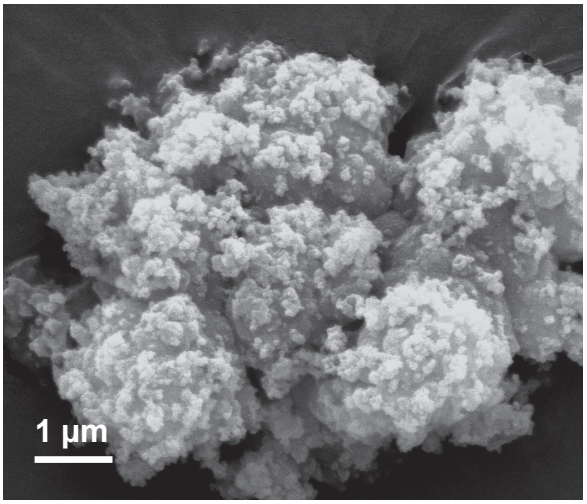

Fig. SI5 Scanning electron micrograph of commercial Basolite F300.

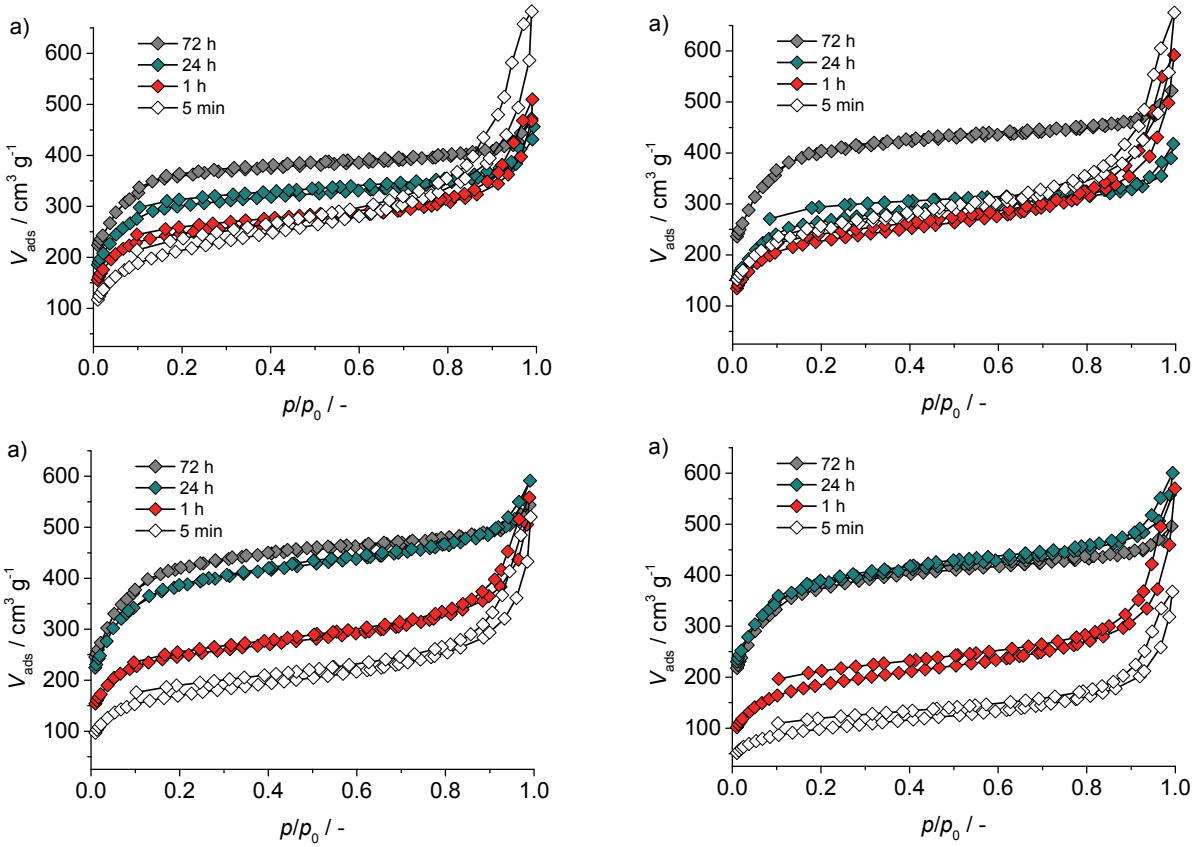

Fig. SI6 Nitrogen isotherms of Fe-BTC samples B obtained with green rust with a) no aging, and aged b) 1 h, c) 5 h and d) 24 h after different crystallisation times.

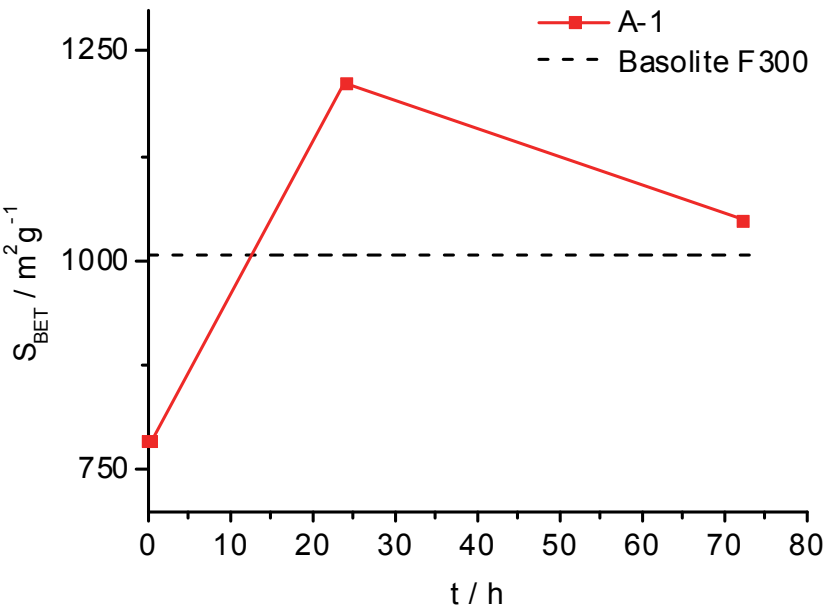

Fig. SI7 Evolution of surface areas for Fe-BTC samples A.

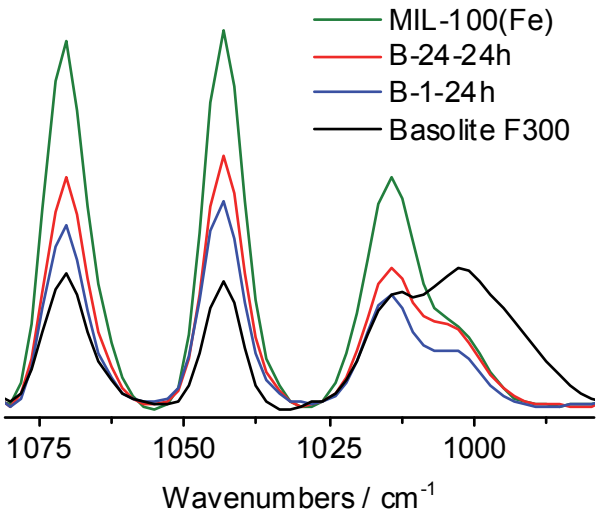

Fig. SI8 FTIR spectra of different Fe-BTC samples after degassing adsorbed pyridine at 150°C. Spectra are normalised to the weight of the dried sample (4.6-5.1 mg).