ESI

Corrosion behaviour of mild steel in 1-alkyl-3-methylimidazolium tricyanomethanide ionic liquids for CO_2 capture applications

I. S. Molchan*, G. E. Thompson, R. Lindsay P. Skeldon, V. Likodimos*, G. Em. Romanos, P. Falaras, G. Adamova and B. Iliev

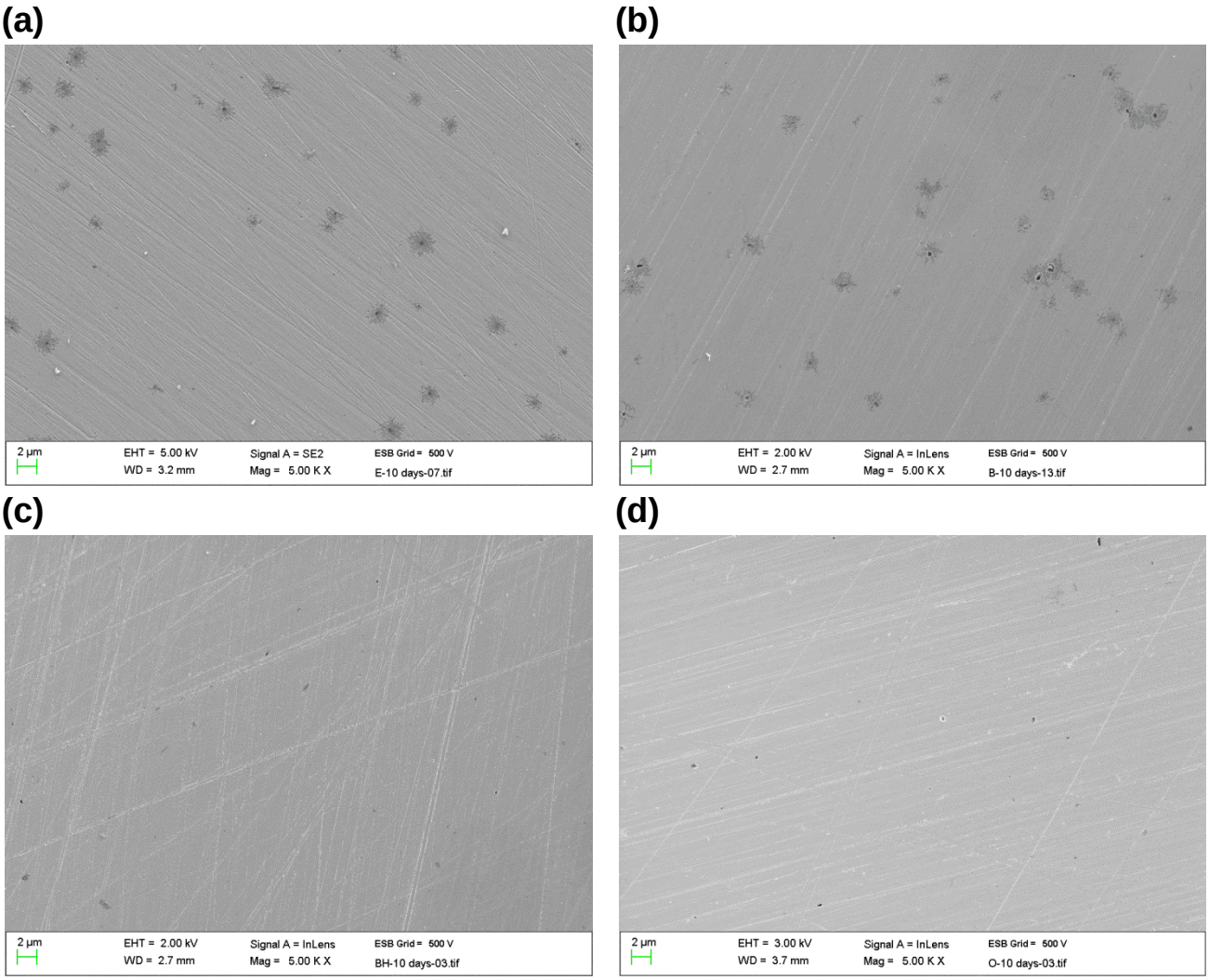

Fig. S1 Scanning electron micrographs of the surface of mild steel after immersion in (a) [C_2mim]TCM, (b) [C_4mim]TCM, (c) [C_6mim]TCM and (d) [C_8mim]TCM at 80 °C for 10 days.

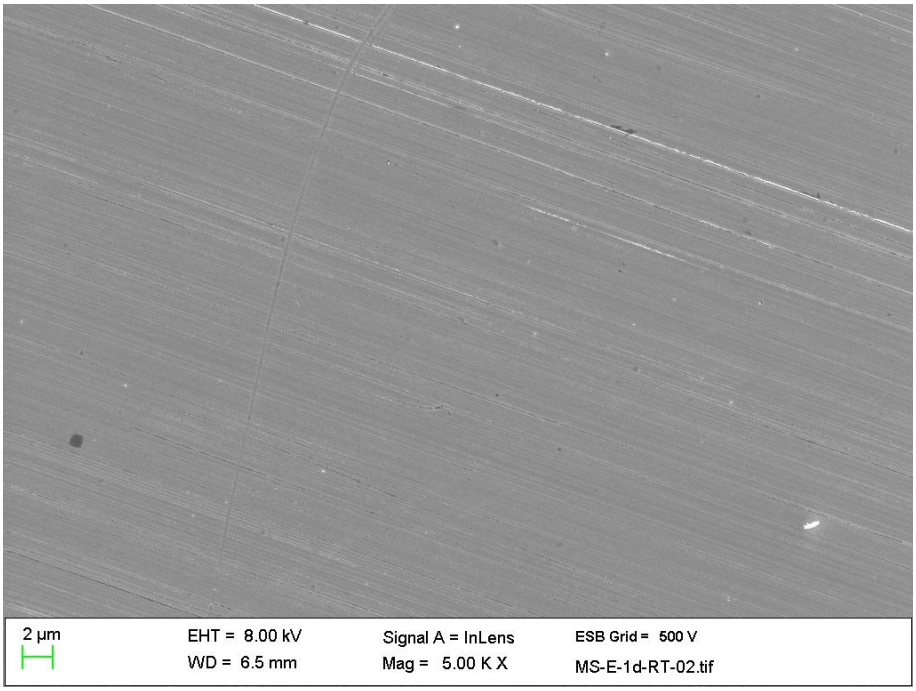

Fig. S2 Scanning electron micrograph of the surface of mild steel after immersion in [C_2mim]TCM at room temperature for 1 day.

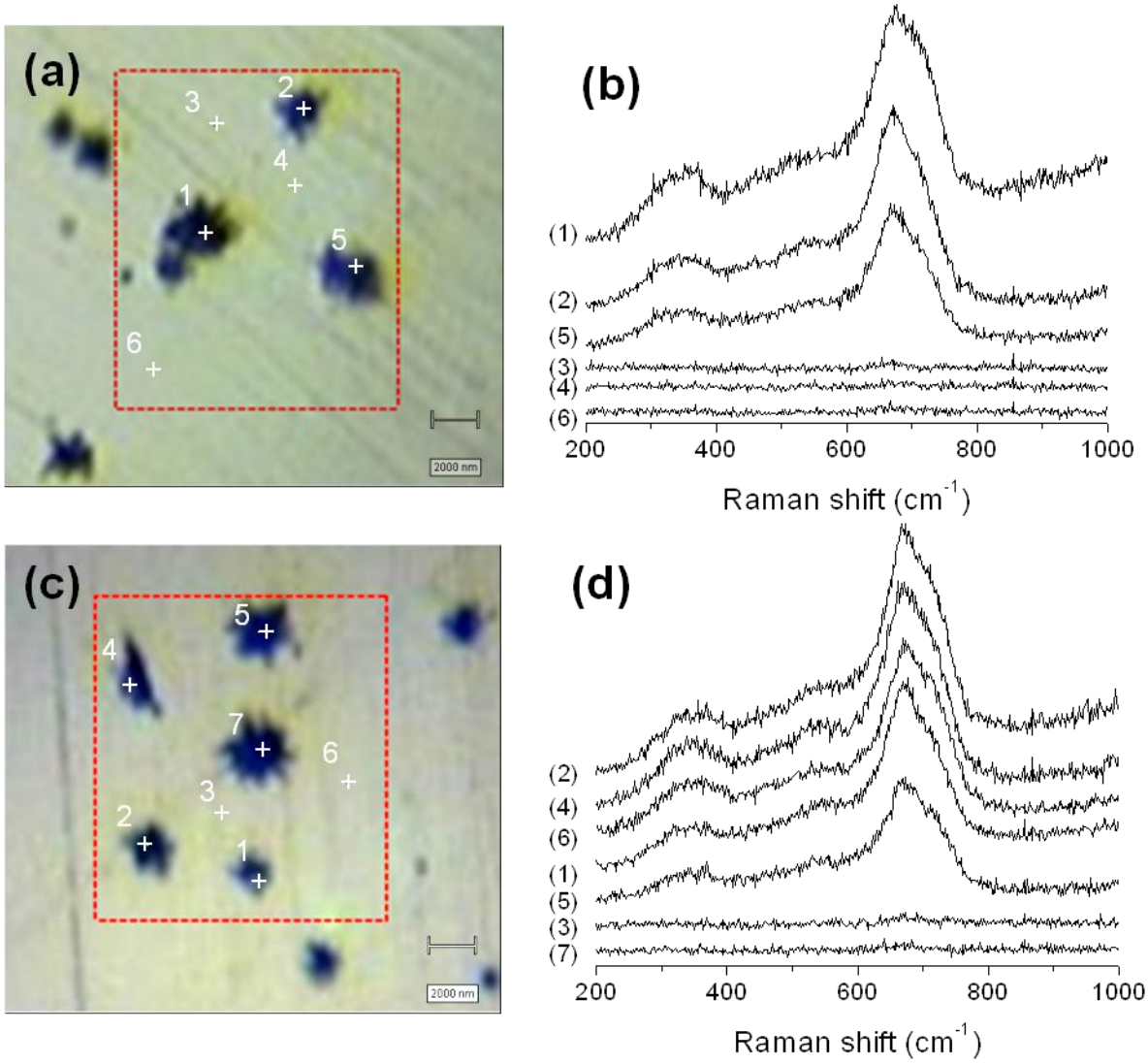

Fig. S3 (a, c) Optical micrographs and (b, d) related Raman spectra at different points on the surface of the MS after immersion in [C_4mim]TCM at 80 ^{o}C for (a, b) 1 and (c, d) 10 days. Excitation wavelength is 514.5 nm.

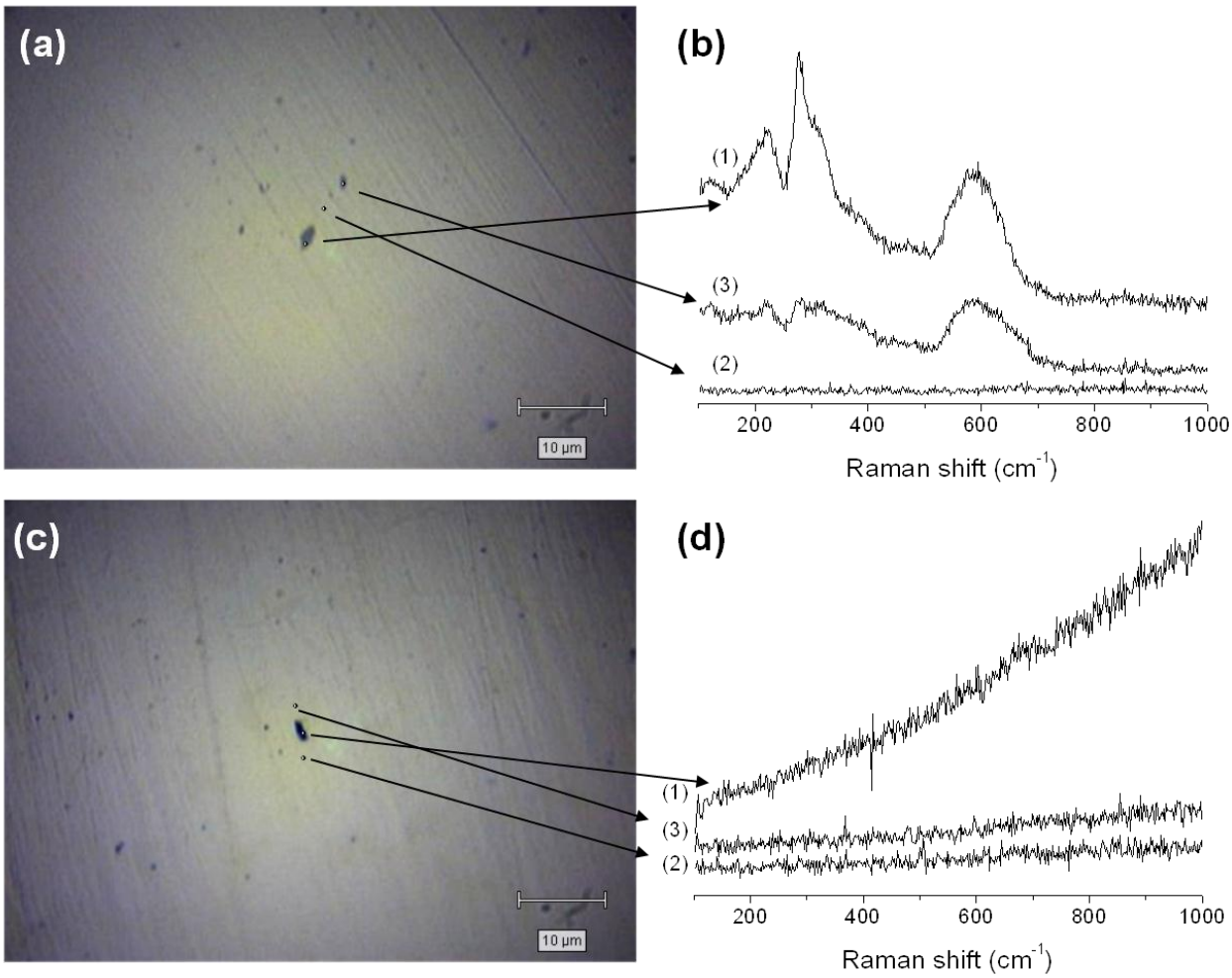

Fig. S4 (a, c) Optical micrographs and (b, d) related Raman spectra at different points on the surface of MS after immersion in [C_8mim]TCM at 70 ºC for 2h: (a, b) as-received and (c, d) with 53900 ppm water. Excitation wavelength is 514.5 nm.