

Supporting information

SYNTHESIS OF CIS PARTICLES FOR CONFIRMATION OF REDOX RESPONSIBILITY BY DLS MEASUREMENTS. 2-(methacryloyloxy)-ethyl ferrocenecarboxylate (FcMA) containing CIS particles featuring a slightly crosslinked shell were synthesised by starved feed emulsion polymerization. First, the PMMA cores were produced in a 250 mL vessel equipped with stirrer, reflux condenser and nitrogen feeding at 75°C as follows. An ice cooled mixture of 12.5 mg sodium dodecylsulfate (SDS), 110 g deionised water, and 1.0 g MMA were filled in the vessel, immediately followed by the addition of 12.5 mg sodium disulfite (NaDS), 47.75 mg sodium persulfate (NaPS) and 12.5 mg NaDS in this order (each component is dissolved in 1 mL water). Then, 10 min after clouding, an emulsion of 50 mg SDS, 50 mg potassium hydroxide (KOH), 62.5 mg Dowfax 2A1, 22.5 g water, and 18.75 g styrene was continuously added with a rate of 0.25 mL/min, followed by the addition of 40 mg NaPS and a second emulsion consisting of 30 mg SDS, 50 mg KOH, 14 g water, 1.8 g FcMA, 9.84 g MMA and 0.36 g ALMA, again with 0.25 mL/min. After complete addition of monomer emulsion, the reaction was completed by holding the temperature for an additional hour.

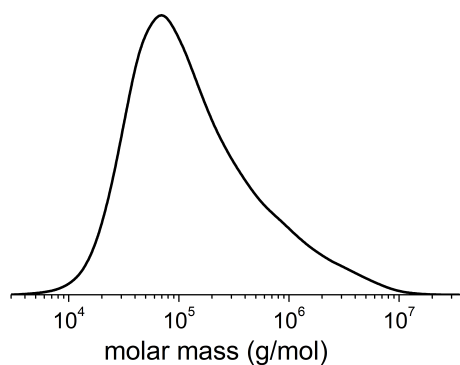


Fig. S1: SEC of PFcMA_{15%}-co-PEA_{85%}. Molar mass is compared to PS standard.

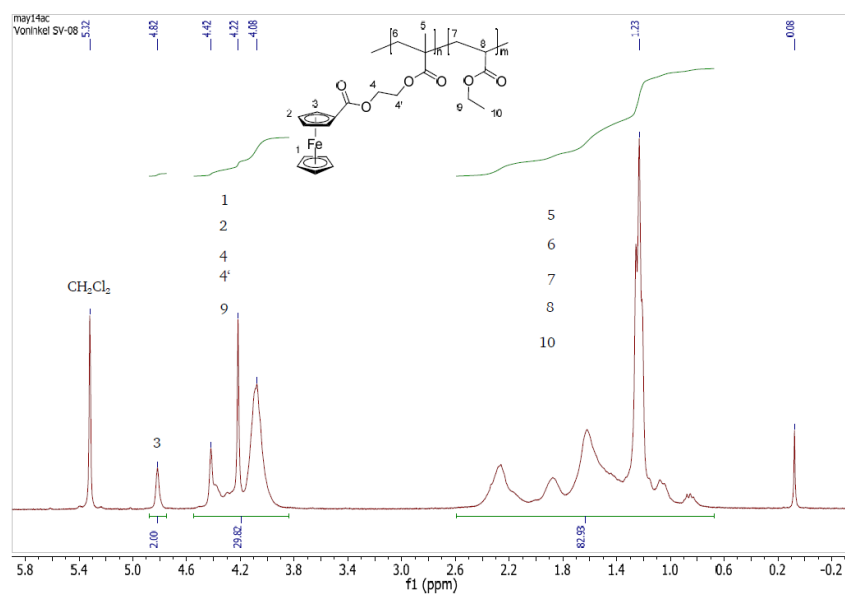


Fig. S2: NMR of PFCMA_{15%}-co-PEA_{85%}.

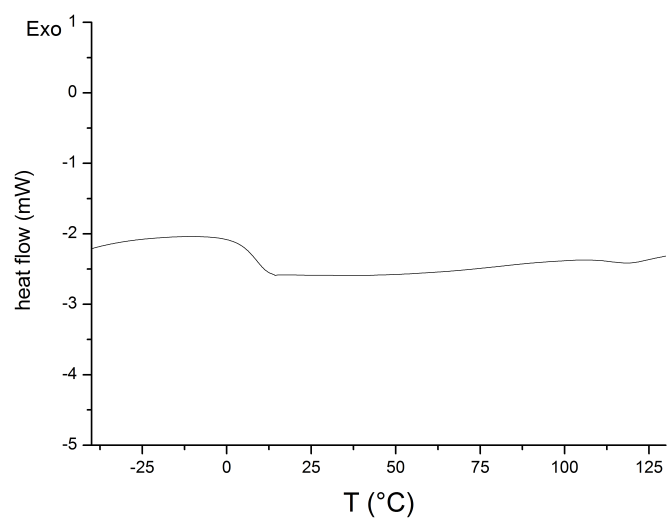


Fig. S3: DSC of CIS particles for elastomeric opal film.

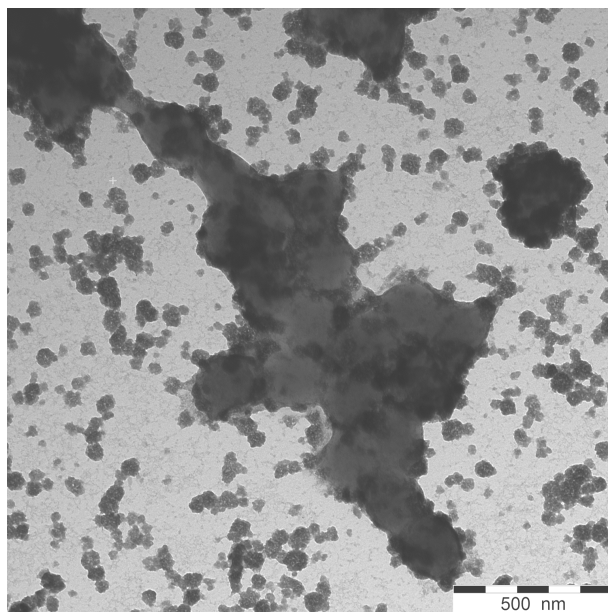


Fig. S4: TEM image of chemically oxidised CIS particles without any crosslinker in shell polymer.
