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PEGylated PNiPAM Microgels : Synthesis, Characterization and Colloidal Stability

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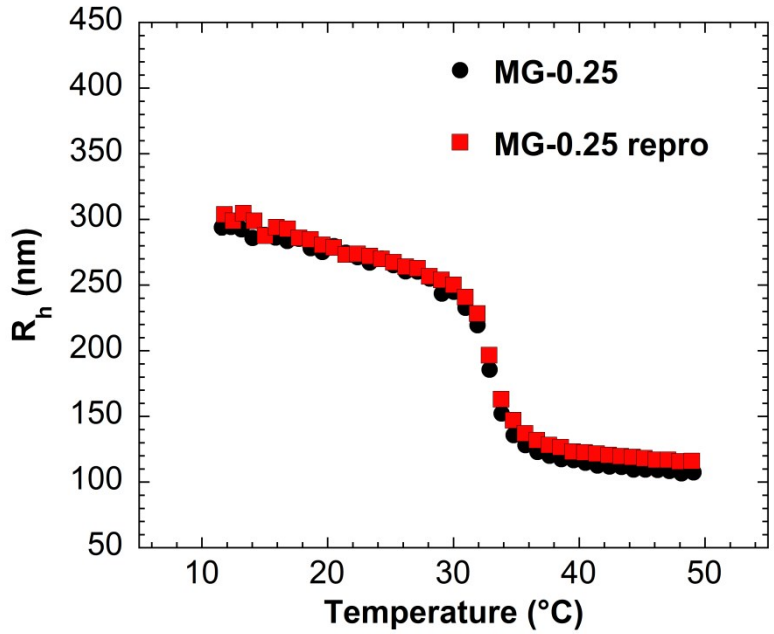


Fig S1 Reproducibility of the synthesis of microgel MG-0.25

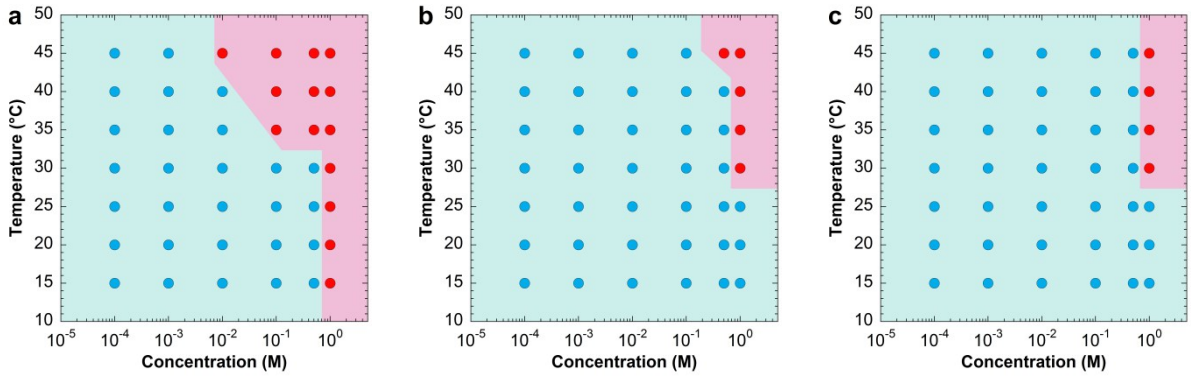


Fig. S2 Diagram phases of (a) MG-0.1, (b) MG-0.25 and (c) MG-0.5 as a function of both the temperature and the $CaCl_2$ concentration in solution. The microgel concentration is C_{MG} = 0.1 wt%. The colors blue and red correspond to one and two phases respectively.

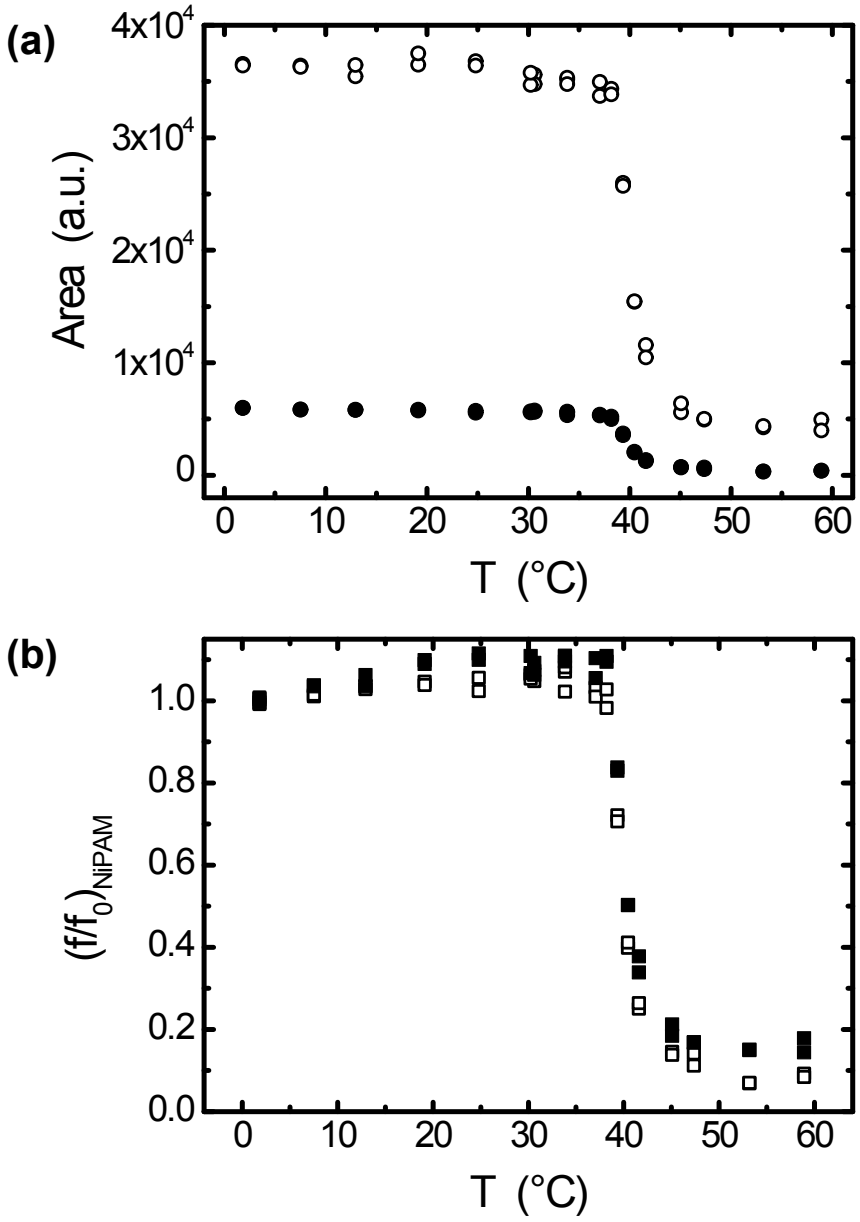


Fig. S3 (a) Temperature dependence of the area under the NMR peaks related to the NiPAM CH_3 (ᔕ) and CH (ᔓ) protons, measured for MG-1, at a concentration C_{MG} in D_2O of 0.05 wt %. **(b)** Variation of the fraction *f* of mobile NiPAM units, with the temperature. This fraction was derived using either the NMR peak assigned to the NiPAM CH_3 protons (○) or the one corresponding to the NiPAM CH proton (●). f_0 denotes the value of *f* at the lowest temperature investigated in this work (about 2 °C).

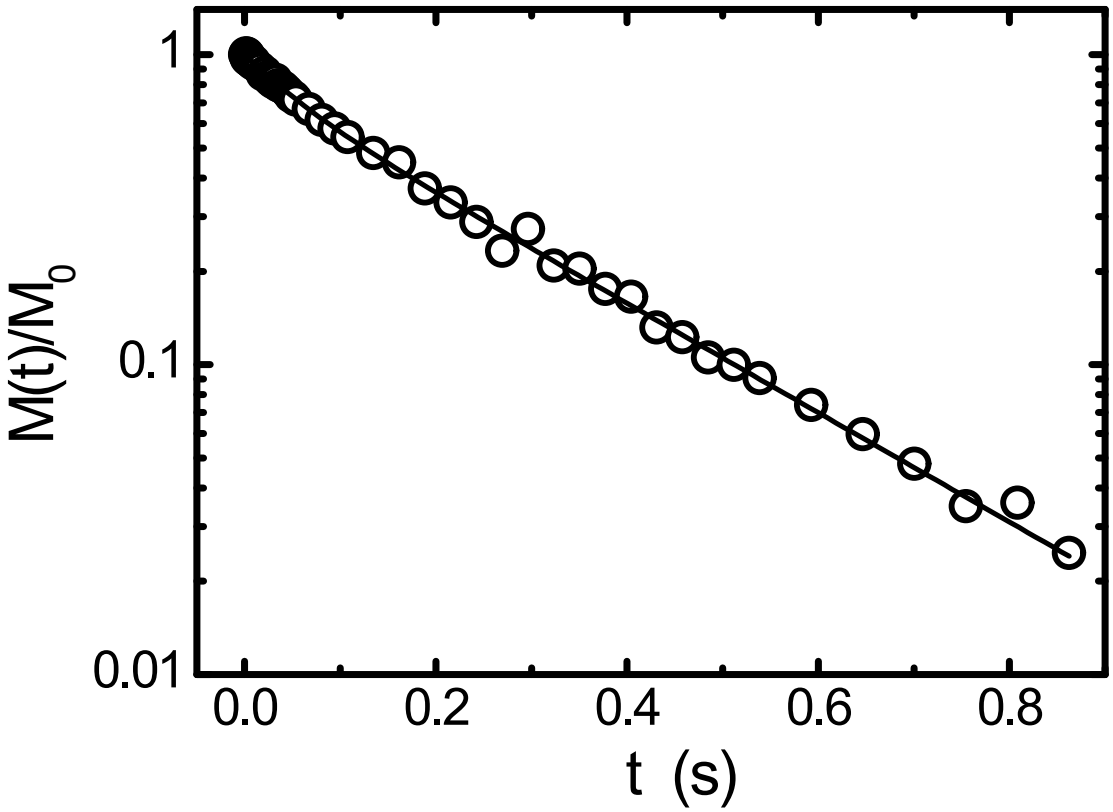
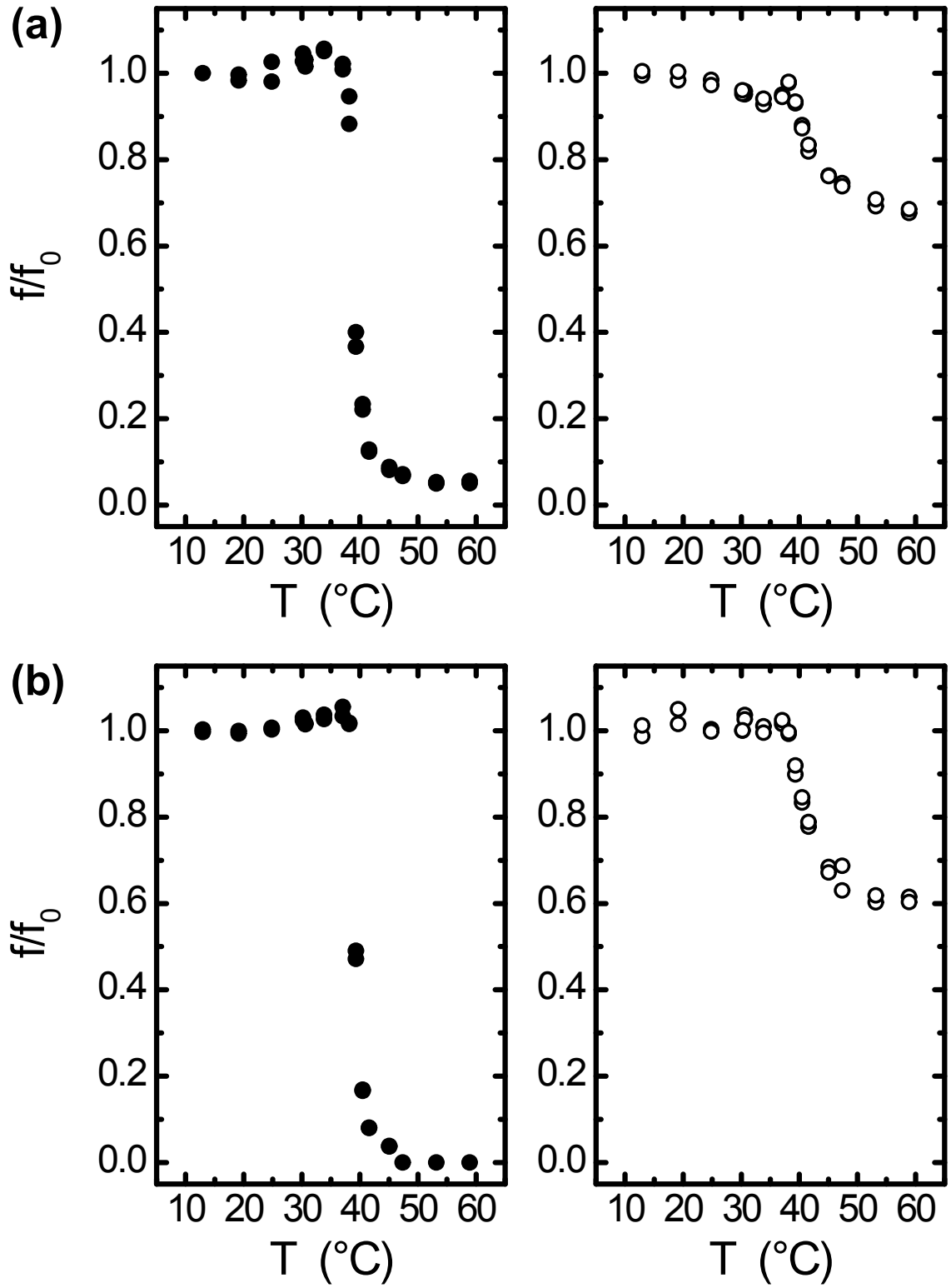


Fig. S4 ^{1}H transverse relaxation signal $M(t)$ for the protons of the PEG side chains of MG-0.5 in D_2O (C_{MG} = 0.05 wt %), determined at 30 °C. The solid line corresponds to the fit of the experimental data.


(a)
(b)
f/f0
T (°C)
0.0
0.2
0.4
0.6
0.8
1.0
10 20 30 40 50 60

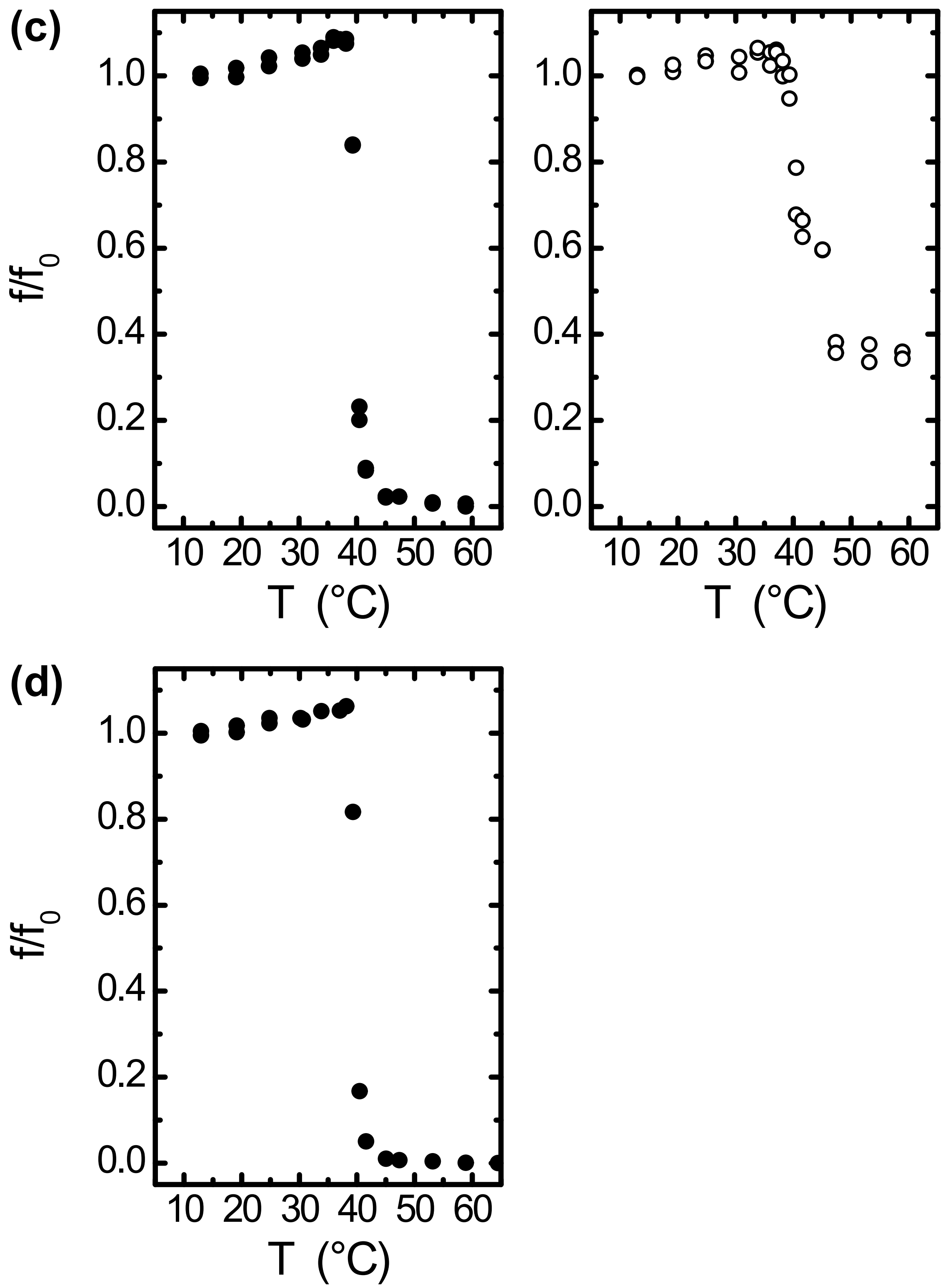


Fig. S5 Evolution of the fraction f of mobile NiPAM (●) and EG (○) units during the volume phase transition process of (a) MG-0.5, (b) MG-0.25, (c) MG-0.1 and (d) MG-0. f_0 is the value measured for f at the lowest temperature considered.