

Supporting Materials:

**Redox Responsive Molecular Assemblies for Smart Materials
Based on Supramolecular Metallic Coordination Polymers**

Yun Yan^{*1,2}, Yuru Lan¹, Arie de Keizer², Markus Drechsler³, Henk Van As⁴, Martien A. Cohen Stuart^{*2}, Nicolaas A. M. Besseling⁵

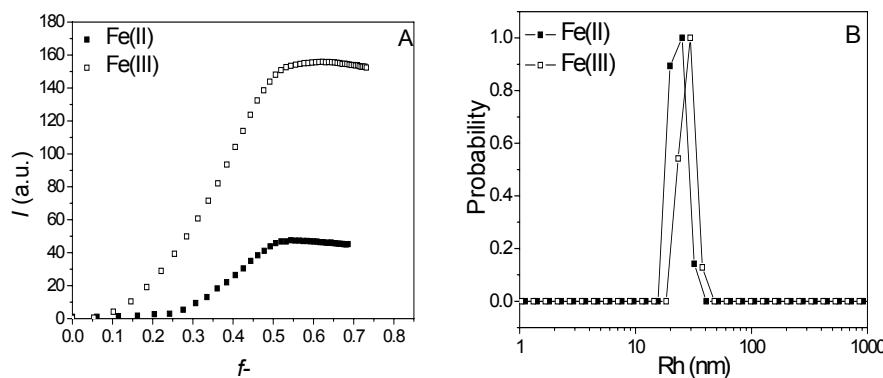


Figure 1. (A) Variation of the scattered light intensity with mixing fraction f ; (B) CONTIN radius distribution of micelles at $f=0.5$.

The CONTIN fits of the distribution of hydrodynamic radii for these particles at charge-neutral composition (Figure. 1b) revealed that micelles with a narrow size distribution are formed in both systems, but the hydrodynamic radius for the Fe(II)-micelles is 23 nm whereas that for Fe(III)-micelles is 27 nm. In combination with the cryo-TEM results, we can conclude that the radii of the micellar cores are 10 and 13 nm, respectively, whereas the thickness of the corona shell formed by the PEO section in both systems are around 13~14 nm.

*Correspondence address: yunyan@pku.edu.cn; Martien.CohenStuart@wur.nl



Figure 2. The color change for the Fe(II) and Fe(III) micelles caused by red-ox treatment. From left to right: **1**, original Fe(II)micelles; **2**, oxidized **1**; **3**, original Fe(III) micelles; **4**, reduced **3**.

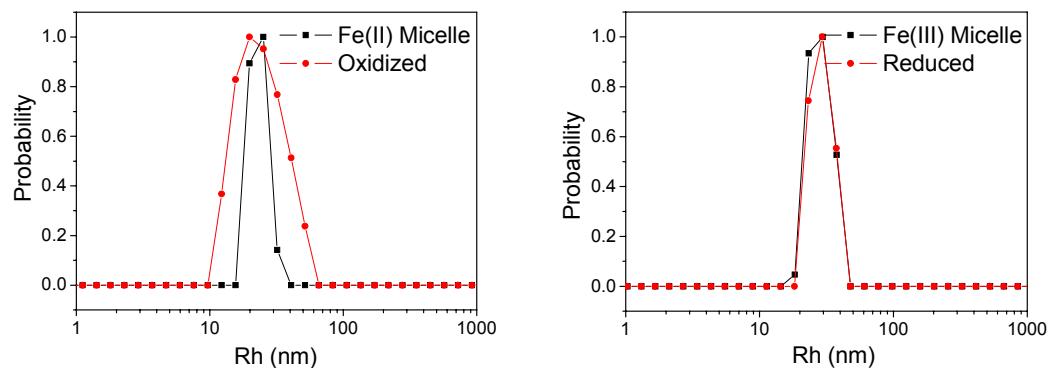


Figure 3. Influence of oxidation and reduction on the Fe-micelles. The original micelles are prepared at $f = 0.5$.

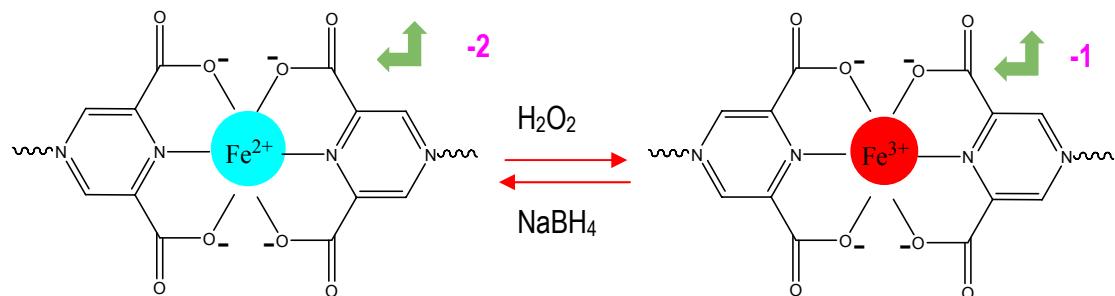


Figure 4: Illustration of the change of the elementary charge(s) at each coordination center.