Electronic Supplementary Information

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Loïc D’Arrasa\textsuperscript{a,b,c}, Capucine Sassoye\textsuperscript{a,b,c}, Laurence Rozes\textsuperscript{a,b,c}, Clément Sanchez\textsuperscript{a,b,c}, Jérôme Marrot\textsuperscript{d}, Samuel Marre\textsuperscript{e}, Cyril Aymonier\textsuperscript{*e}

\textsuperscript{a} Sorbonne Universités, UPMC Univ Paris 06, UMR 7574, Chimie de la Matière Condensée de Paris, Collège de France, 11 place Marcelin Berthelot, 75231 Paris Cedex 05, France. Fax: 33(0)1 44 27 15 04; Tel: 33(0)1 44 27 15 04; E-mail: capucine.sassoye@upmc.fr

\textsuperscript{b} CNRS, UMR 7574, Chimie de la Matière Condensée de Paris, Collège de France, 11 place Marcelin Berthelot, 75231 Paris Cedex 05, France

\textsuperscript{c} Collège de France, UMR 7574, Chimie de la Matière Condensée de Paris, Collège de France, 11 place Marcelin Berthelot, 75231 Paris Cedex 05, France

\textsuperscript{d} Institut Lavoisier, UMR CNRS 8180, Université de Versailles Saint-Quentin-en-Yvelines, 45 Avenue des Etats-Unis, 78035 Versailles, France

\textsuperscript{e} CNRS, Univ. Bordeaux, ICMCB, UPR9048, F-33600 Pessac, France ; Fax: 33(0)5 40 00 27 61; Tel: 33(0)5 40 00 26 72 ; E-mail : aymonier@icmcb-bordeaux.cnrs.fr

ESI-1: SEM images of two morphologies observed from the powder resulting of batch solvothermal synthesis

ESI-2: A TEM grid was prepared by directly casting a drop of liquid resulting from HT-HP process at 150°C – 10MPa for a residence time of 30 s.

ESI-3: XPS spectra of Ce\textsubscript{5}(OOC-C\textsubscript{6}H\textsubscript{4}-COO)\textsubscript{7.5}(DMF)\textsubscript{4} showing the complete absence of Ce(IV): one of the characteristic signatures of Ce(IV) is a well defined peak at 915-917 eV.\textsuperscript{1,2}
ESI-1: SEM images of two morphologies observed from the powder resulting of batch solvothermal synthesis (residence time: two hours).

ESI-2: A TEM grid was prepared by directly casting a drop of liquid resulting from HT-HP process at 150°C – 10MPa for a residence time of 30 s. TEM pictures show scarce solid phase from which several particle morphologies are distinguished (among which a very small minority of the flower-shaped Ce₆(BDC)₇.5(DMF)₄– (c)). This tends to prove the polyphasic aspect of the mixture. Due to extremely low yield, no powder has been recovered by centrifugation with, as a consequence, no XRay diffraction pattern.
ESI-3: XPS spectra of Ce₅(OC₆H₄-COO)₇.₅(DMF)₄ showing the complete absence of Ce(IV): one of the characteristic signatures of Ce(IV) is a well defined peak at 915-917 eV.¹²

Quantitative analysis of elements: Ce: 4.0% (theory: 4.3%); O: 25.4% (29.6%); N: 2.2% (3.1%); C: 68.4% (62.6%)

References: