Ionothermal Synthesis of BiOCl Nanostructures *via* a Long-Chain Ionic Liquid Precursor Route

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Supporting Information

Figure S1. EDS spectrum of BiOCl nanoplates obtained at 180 °C for 24h.

Figure S2. SEM image of the samples synthesized with 1 mmol $\text{Bi}(\text{NO}_3)_3$ and 1mmol $[\text{C}_{16}\text{Mim}]\text{Cl}$ in 15 ml distilled water at 180 °C for 24.

Figure S2. SEM image of BiOCl nanoplates obtained at 180 °C for 3h.

The sample obtained for 3 h (Figure S3) is composed of nanoplatelets, which ripened into nanoplates (Figure 2a and b) as the reaction time increased. This indicates that reaction process is an ‘Ostwald ripening’ process rather than an exfoliation-like process.