Synthesis, Chloride-Ion Diffusion Mechanisms, and Anisotropic Sintering of 2D Layered Erbium Oxychloride Nanoplatelets

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Supplementary Information

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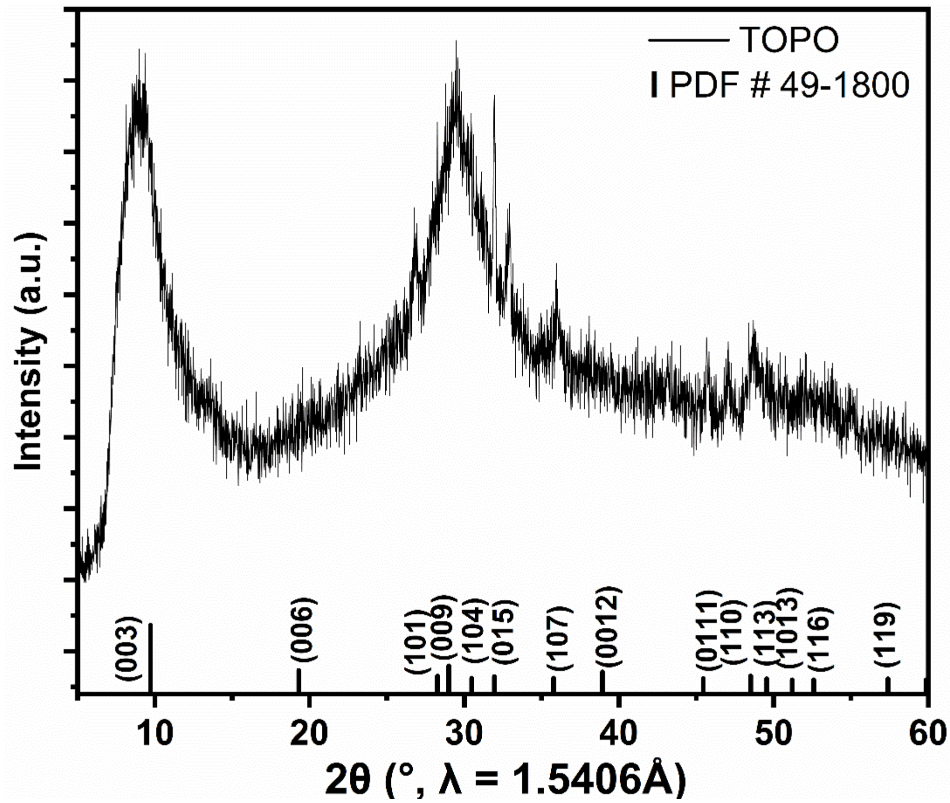

Figure S1: Powder XRD pattern of ErOCl prepared using TOPO as the coordinating ligand indexed to a R3m unit cell (PDF#49-1800, black ticks).

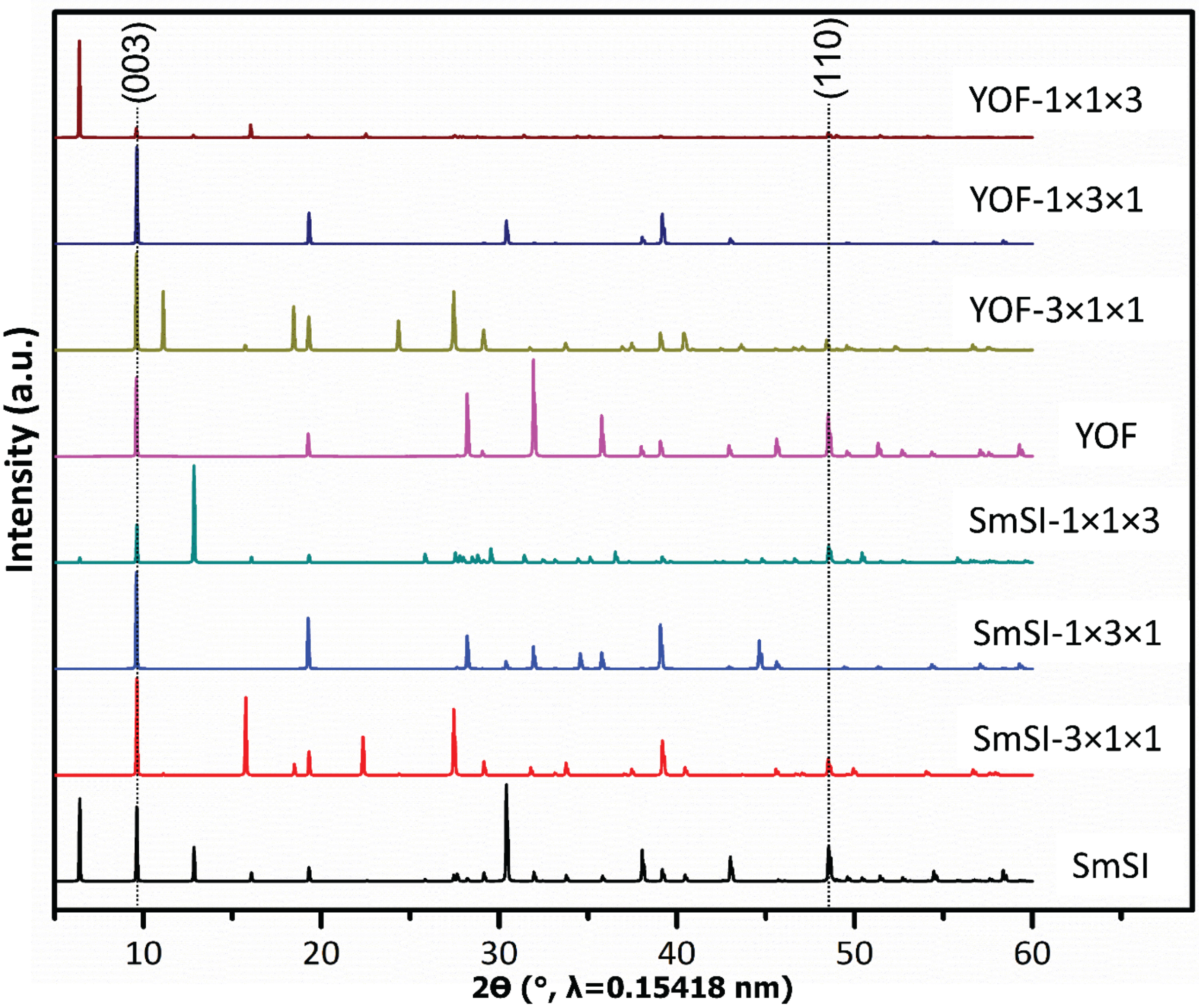

Figure S2: Simulated X-ray diffraction patterns of supercells of SmSI and YOF variants illustrating the impact of directional sintering on relative intensities of reflections.

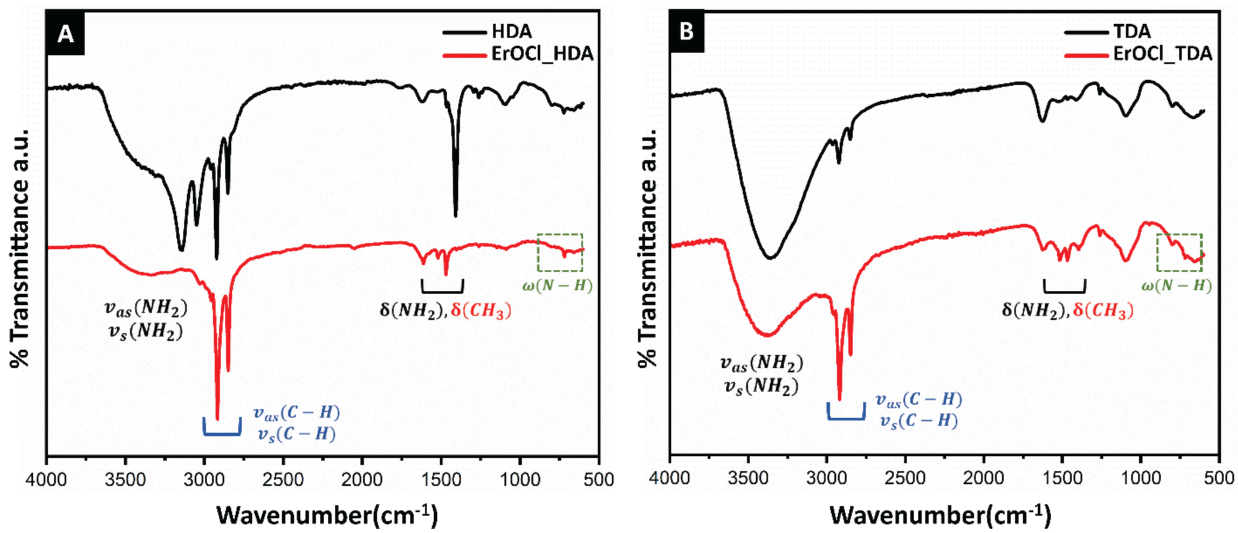

Figure S3: (A) FTIR spectra of hexadecylamine (black) and HDA-capped ErOCl (red) indicating the presence of of hexadecylamine as a capping ligand. (B) FTIR spectrum of tetradecylamine (black) and TDA-capped ErOCl (red) indicating the role of tetradecylamine as a capping ligand. Note: v = stretching vibrational modes; δ = bending vibrational modes; ω = wagging and scissoring modes.