

Supplementary Material

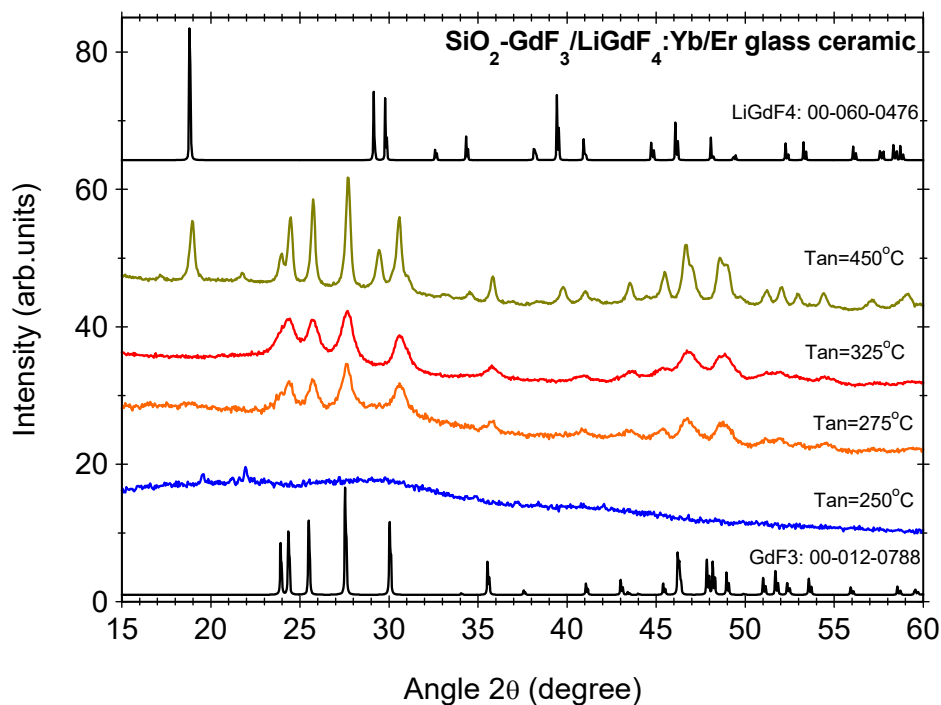


Figure S1. Normalized XRD patterns of the Yb³⁺/Er³⁺-doped SiO₂-GdF₃(x2Li mol.%) nano-glass ceramic annealed at different temperatures; the PDF files of GdF₃ and LiGdF₄ are also shown

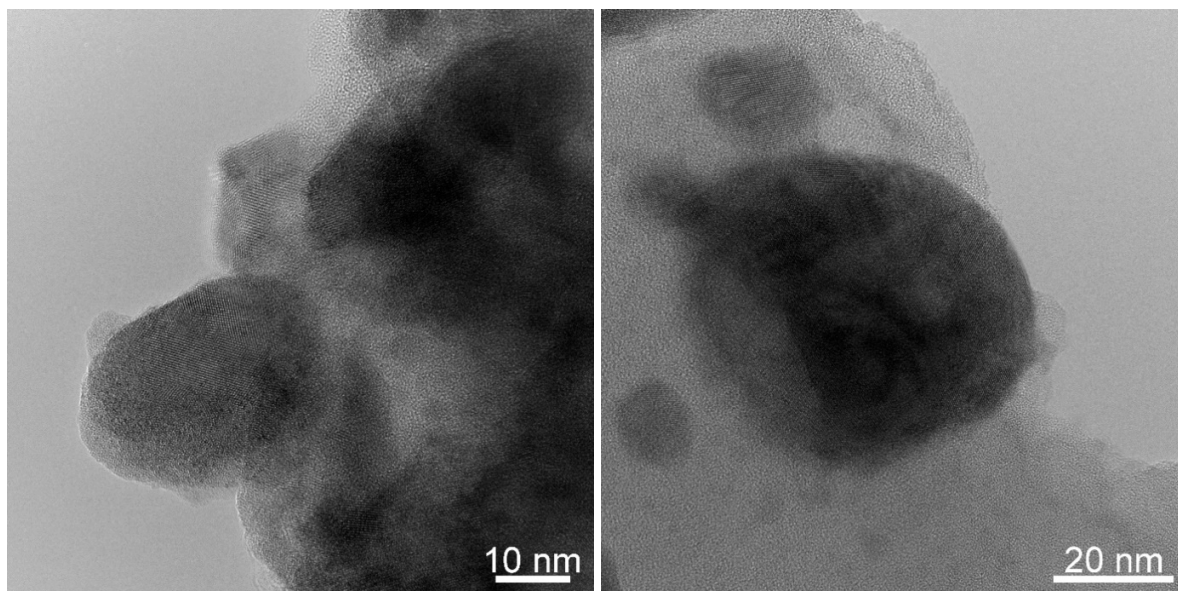


Figure S2. High-magnification TEM images of the nanoparticles within the Yb³⁺/Er³⁺-doped SiO₂-GdF₃(x2Li mol.%) nano-glass ceramic.

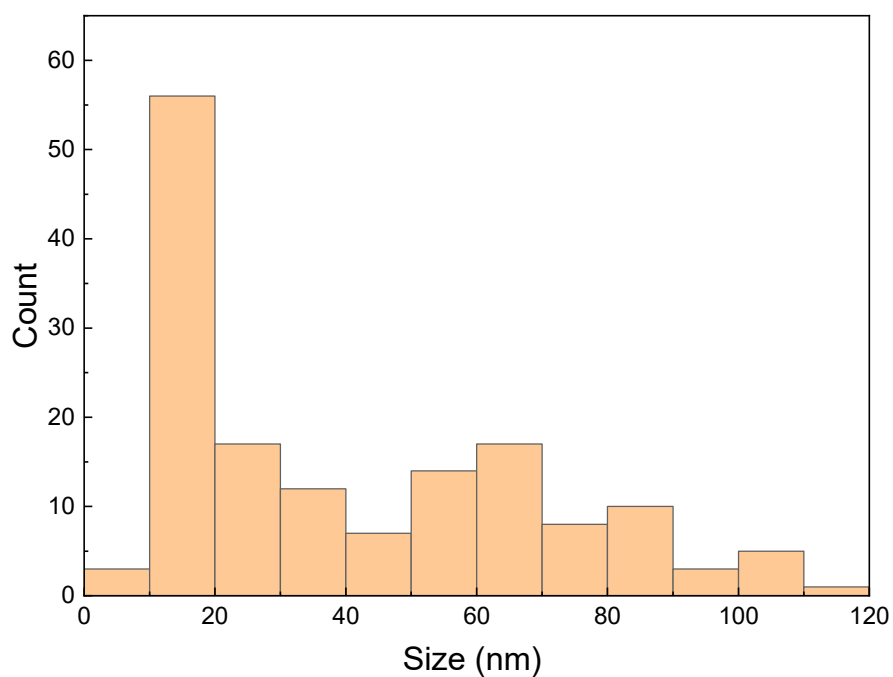


Figure S3. Nanocrystals size distribution of the nanoparticles within the Yb³⁺/Er³⁺-doped SiO₂-GdF₃(x2Li mol.%) Li2GC nano-glass ceramic

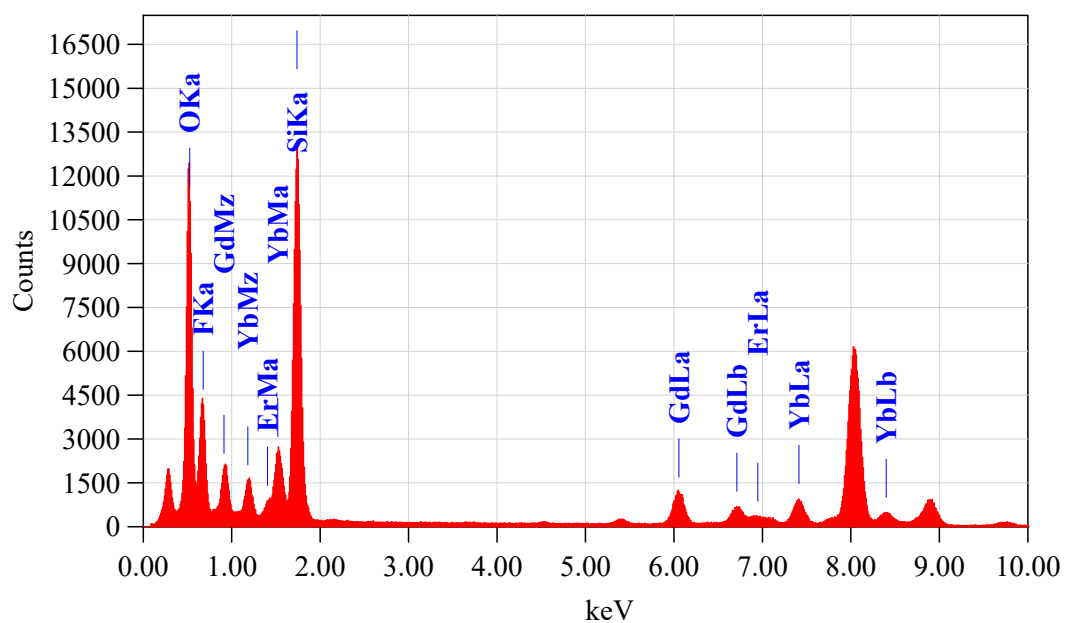


Figure S4. EDX spectra of the the Yb³⁺/Er³⁺-doped SiO₂-GdF₃(x2Li mol.%) Li2GC nano-glass ceramic.