

Thermal and mechanical stability of lanthanide-containing glass-ceramic sealants for solid oxide fuel cells

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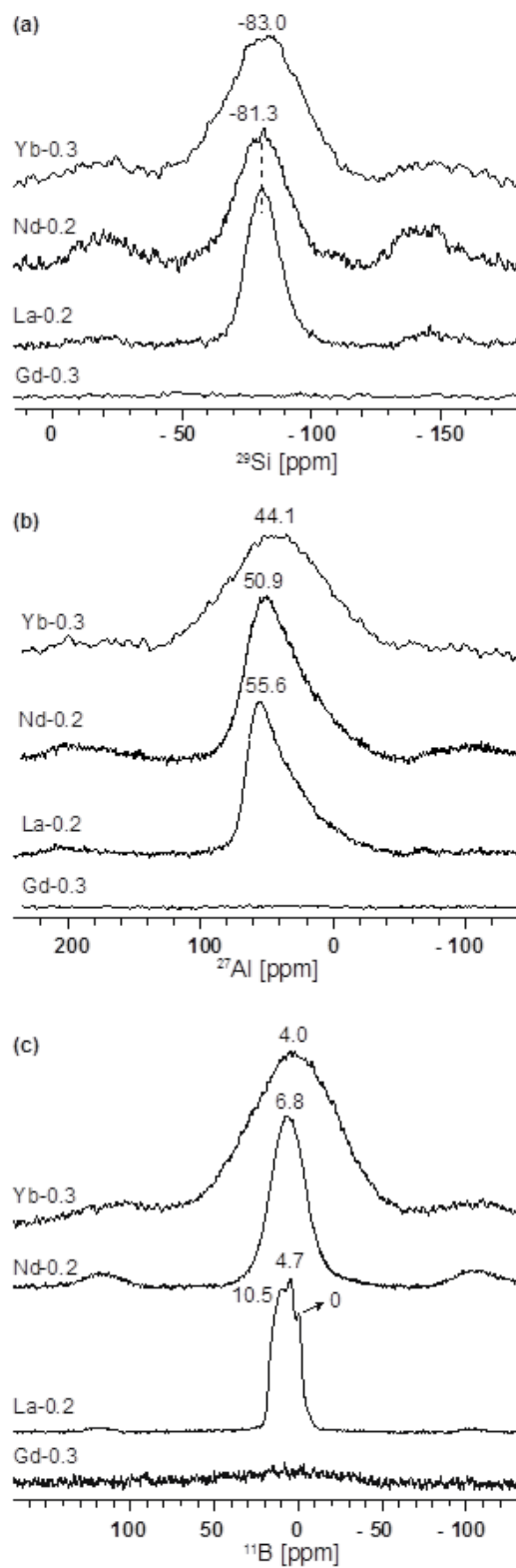


Fig. S1 MAS NMR spectra of (a) ^{29}Si , (b) ^{27}Al and (c) ^{11}B nuclides for the glass powders.

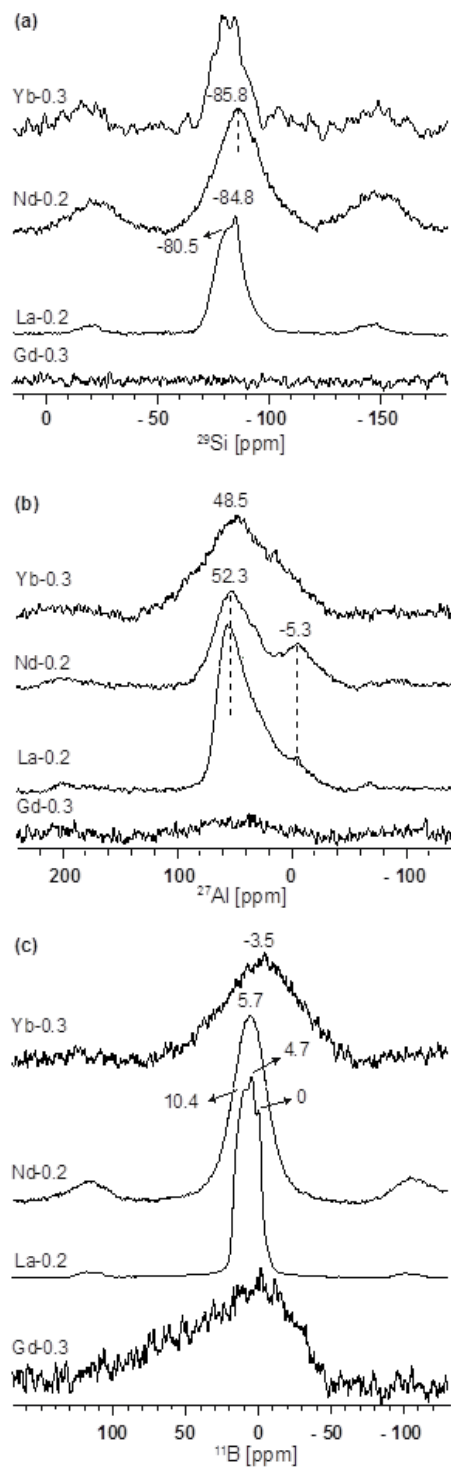


Fig. S2 MAS NMR spectra of (a) ^{29}Si , (b) ^{27}Al and (c) ^{11}B nuclides for the GCs sintered at 850 °C for 1 h.

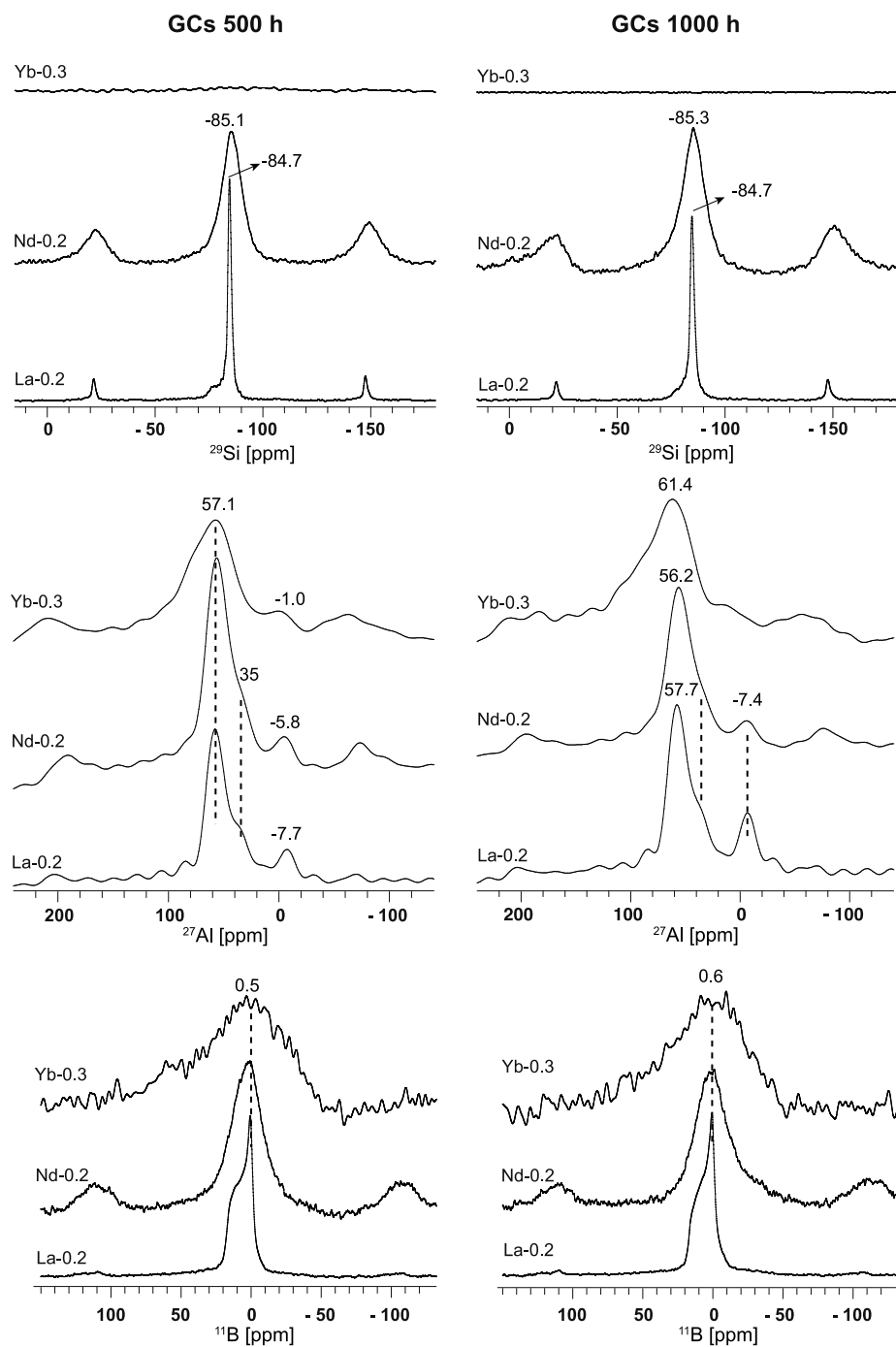


Fig. S3 MAS NMR spectra of ^{29}Si , ^{27}Al and ^{11}B nuclides of the GCs heat treated at 850 °C for 500 h and 1000 h.

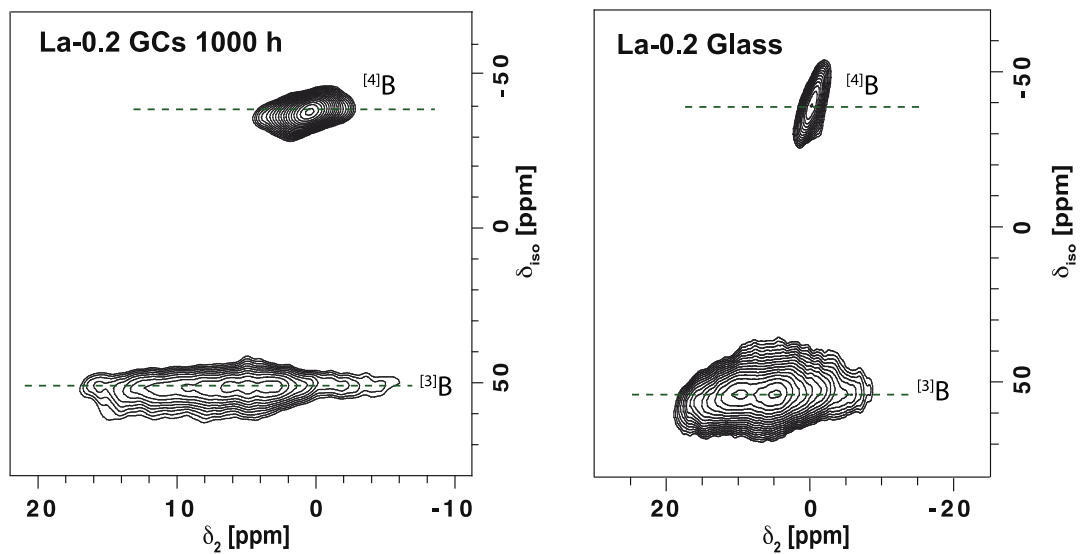


Fig. S4 ^{11}B 3QMAS spectra of the GC heat treated at 850 °C for 1000 h (left) and the glass powder (right) corresponding to the La-0.2 sample.

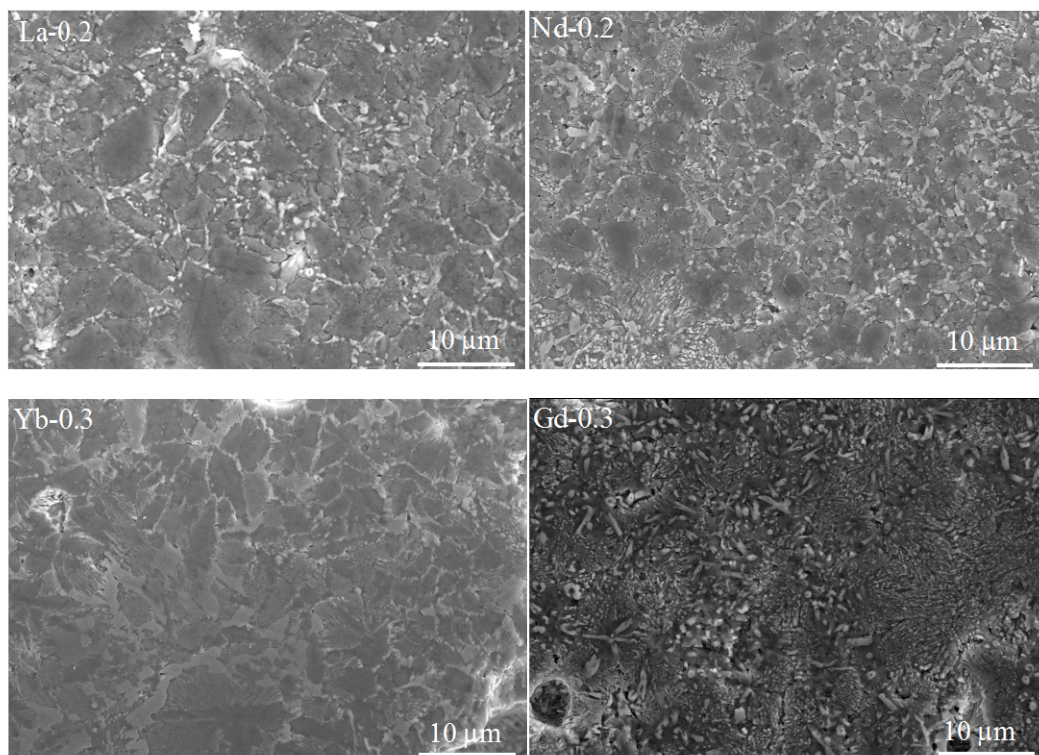


Fig S5: SEM microstructures of glass-powder compacts heat treated at 850 °C for 1000 h.

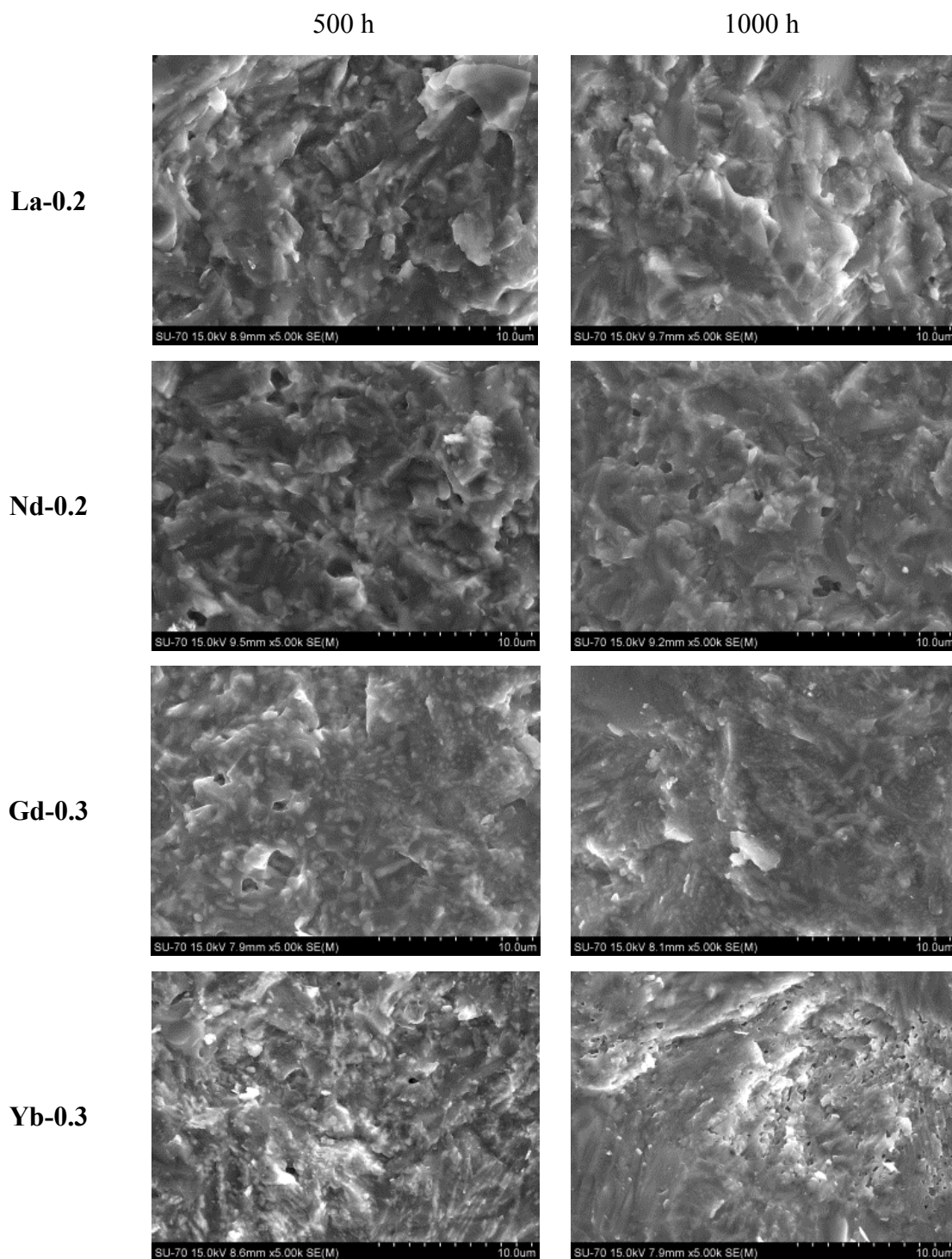


Fig S6: Fractured surfaces of glass-powder compacts heat treated at 850 °C for 500 h and 1000 h after the 3 point bending strength measurement.