

Supporting Information for

Comprehensive Insight into the Synthesis, Structure, Stability, and Ionic Conductivity of $\text{Na}_5\text{MSi}_4\text{O}_{12}$ type Solid Electrolytes for Solid-State Sodium Batteries

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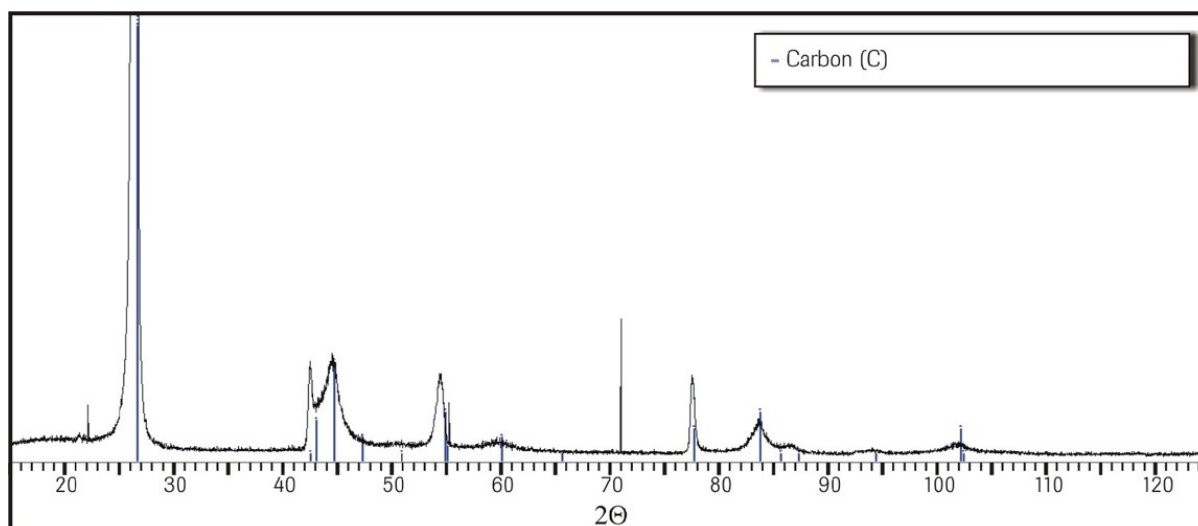


Figure S1: XRD patterns of the graphite dome used for in-situ high temperature measurements

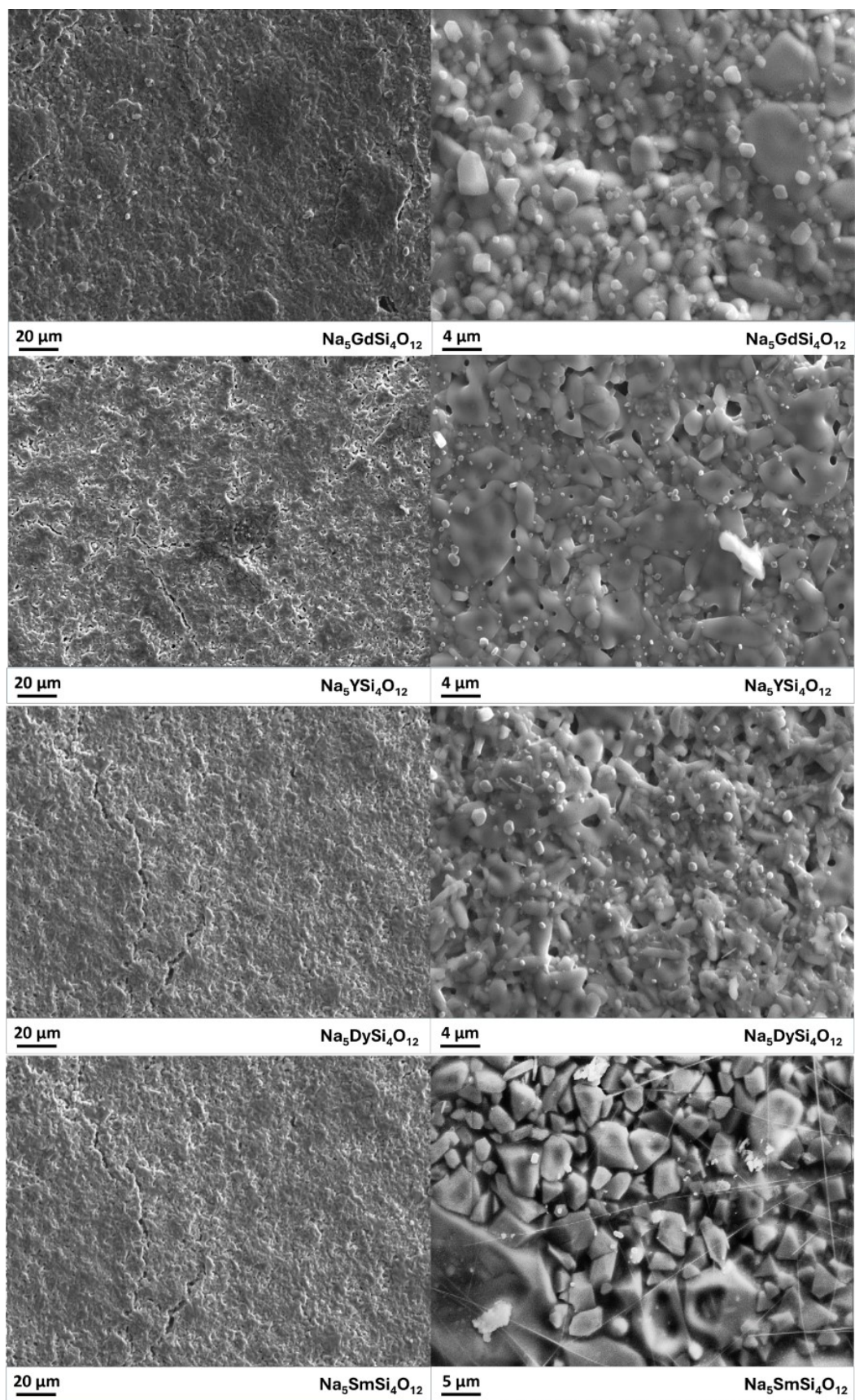


Figure S2: SEM images of sintered discs of the NMS series.

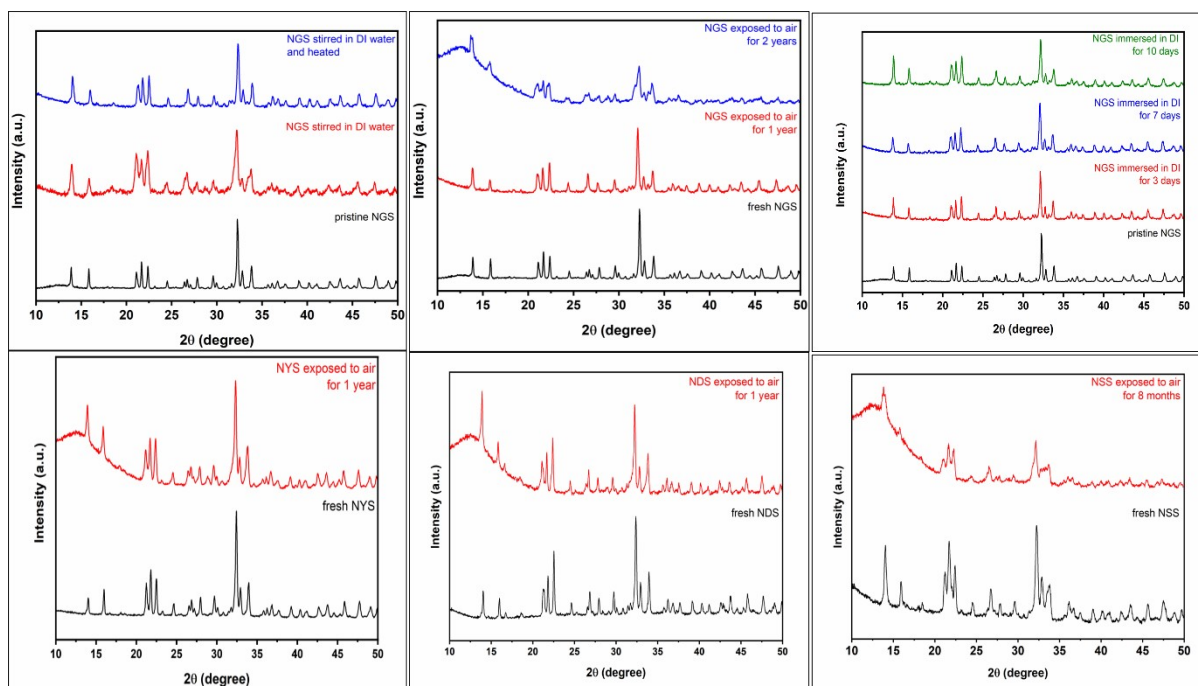


Figure S3: XRD patterns of NMS exposed to air and water for different lengths of time

Table S1: Ionic conductivities of NMS-type compounds

T (°C)	Ionic conductivity (S cm ⁻¹)			
	NGS	NYS	NDS	NSS
30	1.99×10^{-3}	1.56×10^{-3}	1.99×10^{-3}	6.13×10^{-4}
40	2.40×10^{-3}	2.01×10^{-3}	2.59×10^{-3}	8.26×10^{-4}
50	3.01×10^{-3}	2.60×10^{-3}	3.34×10^{-3}	1.21×10^{-3}
60	3.81×10^{-3}	3.26×10^{-3}	3.88×10^{-3}	1.74×10^{-3}
70	4.39×10^{-3}	3.84×10^{-3}	4.34×10^{-3}	2.25×10^{-3}
80	5.20×10^{-3}	4.33×10^{-3}	5.69×10^{-3}	2.94×10^{-3}
90	6.26×10^{-3}	4.86×10^{-3}	6.46×10^{-3}	3.42×10^{-3}
100	7.17×10^{-3}	5.38×10^{-3}	7.09×10^{-3}	4.65×10^{-3}
110	7.71×10^{-3}	5.73×10^{-3}	7.68×10^{-3}	5.05×10^{-3}
120	8.56×10^{-3}	6.41×10^{-3}	8.09×10^{-3}	5.51×10^{-3}