

# Novel Phosphite Doping into ALD SiO<sub>2</sub> to improve H<sup>+</sup> and H<sub>2</sub> Permeability in Water Electrolyzers

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Figure 1: Relative H<sup>+</sup> permeability (blue, left axis) and relative H<sub>2</sub> gas permeability (orange, right axis) with respect to the separate ALD process types and PO<sub>4</sub><sup>-3</sup> precursors. All numbers are relative to a monolith of ALD SiO<sub>2</sub> deposited under the same conditions. Note that all H<sub>2</sub> gas permeabilities decreased relative to the SiO<sub>2</sub> baseline, which is highlighted by the left-hand axis scale. The best performing film is boxed in green.

