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Crosslinked sulfonated aromatic ionomers via SO₂ bridges: conductivity properties

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Highlights:

1. Proton conductivity of SPEEK optimized by hydration, possible only for crosslinked polymer
2. Plot of proton mobility vs hydration number λ indicates conditions for an optimal conductivity
3. At $\lambda > 20$, proton conductivity > 0.1 S/cm predicted at 100°C; measured value 0.16 S/cm at $\lambda = 60$

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