Supplementary Material

**PEO-based composites as solid-state polymer electrolytes for lithium metal batteries: a mini review**

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**Table S1** Ionic conductivities of PEO-based composite polymer electrolytes with various fillers.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Fillers | Lithium salts | Ionic conductivity (S cm‒1) | Temperature (ºC) | Ref. |
| Al2O3 | LiCF3SO3 | 4.8×10‒6 | 25 | (27) |
| SiO2 | LiClO4 | 1.1×10‒4 | 30 | (28) |
| Li1.5Al0.5Ge1.5(PO4)3 | LiTFSI | 1.67×10‒4 | room temperature | (24) |
| Li1+xAlxTi2−x(PO4)3 | LiClO4 | 0.52×10‒4 | room temperature | (30) |
| Li0.35La0.55TiO3 | LiTFSI | 0.88×10‒4 | room temperature | (31) |
| Li7La3Zr2O12 | LiTFSI | 2.39×10‒4 | 25 | (32) |
| Li3PS4 | Li3PS4 | 8.01×10‒4 | 60 | (33) |
| LiBMB | LiBMB | 0.45×10‒3 | 30 | (34) |
| Silsesquioxane | LiTFSI | 4.4×10‒4 | 80 | (36) |
| PSH | LiCF3SO3 | 7.2×10‒5 | room temperature | (37) |
| PDEC | LiTFSI | 1.12×10‒5 | 25 | (38) |
| PSt | LiClO4 | 2×10‒4 | 30 | (39) |
| PVDF | LiClO4 | 3.03×10‒3 | room temperature | (40) |
| PVA | LiClO4 | 3.5×10‒3 | room temperature | (41) |
| TPU | LiTFSI | 5.3×10‒4 | 60 | (42) |
| PS | LiTFSI | 4×10‒4 | 60 | (43) |
| Al2O3+Pr4N+I‒ |  | 4.2×10‒4 | 24 | (44) |
| Li6.4La3Zr1.4Ta0.6O12+SN | LiTFSI | 1.22×10‒4 | 30 | (45) |
| LiAl-PEG | LiClO4 | 2.6×10‒4 | 100 | (23) |
| PBT-PEO-PET | LiTFSI | 8.2×10‒4 | 90 | (46) |
| PMMA+P(VDF-HFP) | LiPF6 | 8.1×10‒5 | 25 | (47) |
| PEO-Perovskite-PEO | LiTFSI | 1.6×10‒5 | 24 | (48) |
| Multilayered PEO | LiTFSI | 5×10‒4 | 30 | (25) |