

Supporting Information

**A Poly(ethylene oxide)-co-Poly(propylene oxide) Based Gel
Electrolyte with High Ionic Conductivity and Mechanical Integrity
for Lithium Ion Batteries**

Shih-Hong Wang,¹ Sheng-Shu Hou,¹ Ping-Lin Kuo,¹ and Hsisheng Teng^{1,2,*}

¹Department of Chemical Engineering and Research Center for Energy Technology
and Strategy, National Cheng Kung University, Tainan 70101, Taiwan

²Center for Micro/Nano Science and Technology, National Cheng Kung University,
Tainan 70101, Taiwan

*To whom correspondence should be addressed. (E-mail): hteng@mail.ncku.edu.tw

(Fax): 886-6-2344496; (Tel): 886-6-2385371

Supporting information for:

- 1. Thermogravimetric analysis of GPE and LE.**
- 2. Ionic conductivities of LE alone in liquid state.**

1. Thermogravimetric analysis of GPE and LE

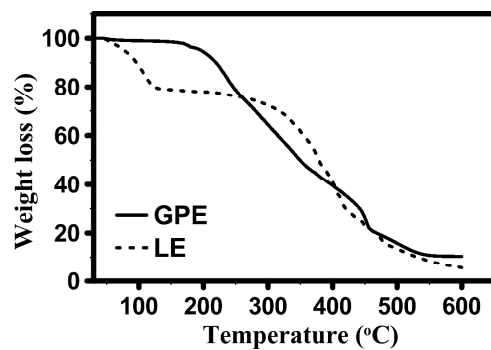


Figure S1. Thermogravimetric analysis of GPE and LE conducted at $5\text{ }^{\circ}\text{C min}^{-1}$ under an N_2 environment. GPE was more stable than the LE swelling Celgard and exhibited negligible mass loss at temperatures lower than $90\text{ }^{\circ}\text{C}$.

2. Ionic conductivities of LE alone in liquid state

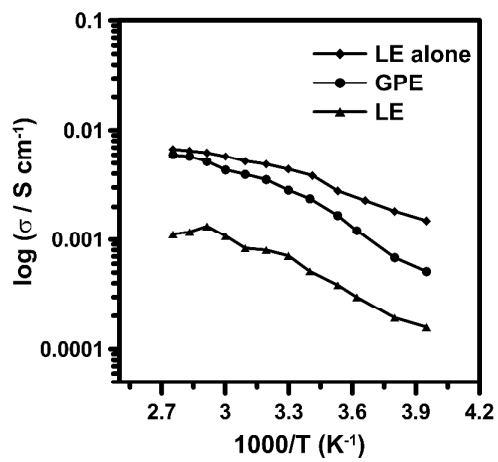


Figure S2. Ionic conductivities of LE alone in liquid state determined from AC impedance at temperatures of -20 to 90 $^{\circ}\text{C}$. The conductivity data were compared to those of GPE and the LE that swells the Celgard membrane.