

Supporting Information

Microtribological Properties of Spin-Coated Thin Film of 1-Butyl-3-(propyltrimethoxysilane)imidazolium Bis(mandelato)borate Ionic Liquid

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PM IL 1R(00251)/CDCl3
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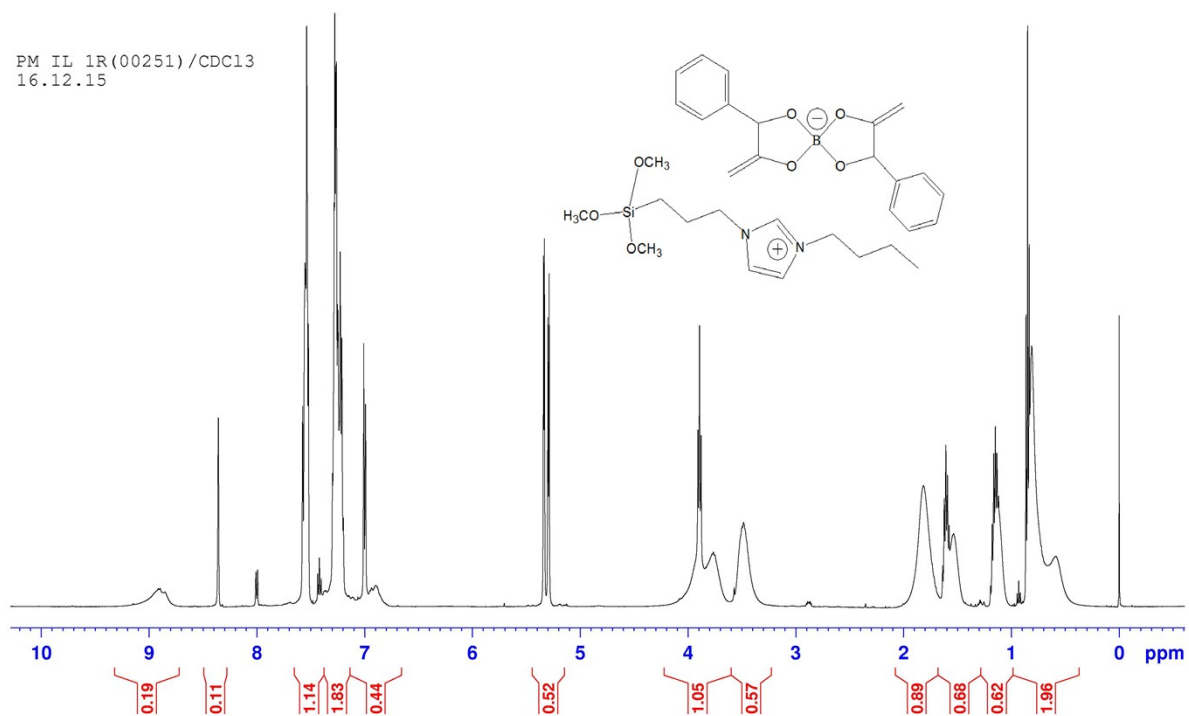


Figure S1: ¹H NMR spectrum of 1-butyl-3-(propyltrimethoxysilane)imidazolium bis(mandelato)borate (BPTmSiIm-BMdB) ionic liquid

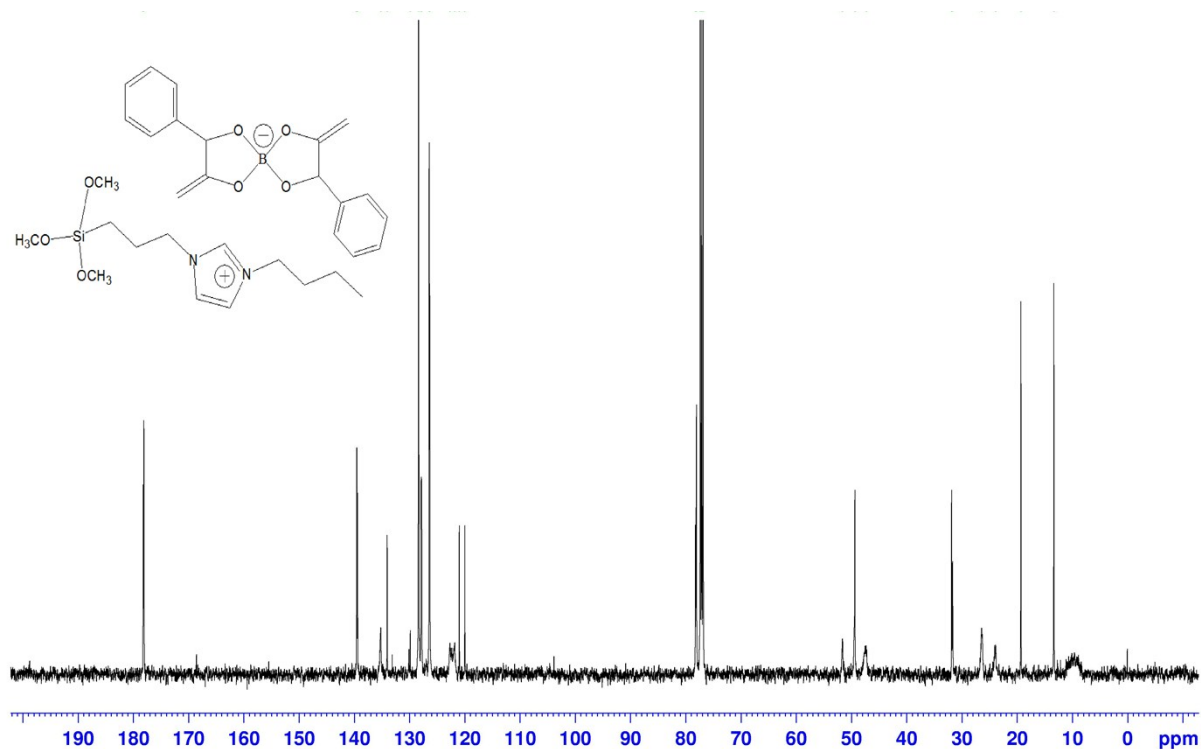


Figure S2: ^{13}C NMR spectrum of 1-butyl-3-(propyltrimethoxysilane)imidazolium bis(mandelato)borate (BPtmSiIm-BMdB) ionic liquid

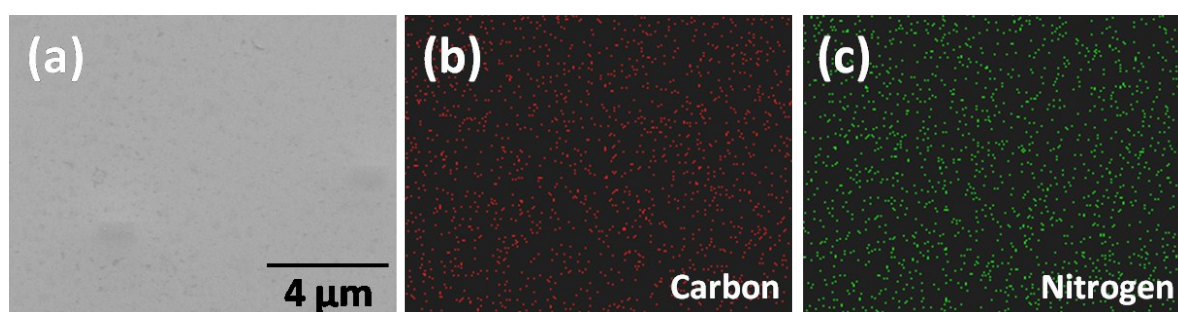


Figure S3: (a) FESEM image of a thin film of BPtmSiIm-BMdB ionic liquid deposited on a silicon substrate. (b and c) Corresponding Carbon and Nitrogen mapping based on EDX measurement of BSiPIm-BMdB thin film.

Table S1: Infrared modes of BPtmSiIm-BMdB ionic liquid along with their vibrational assignment

Peak position, cm⁻¹	Vibrational assignment
3145, 3088, 3063, 3029	$\nu(\text{C-H})$, aromatic ring
3000-2800	ν_a & ν_s $\text{CH}_2 / \text{CH}_3$ group
1732	$\nu(\text{C=O})$
1606	$\nu_a(\text{COO})$
1538	$\nu(\text{C=C})$, aromatic
1495, 1453	$\delta\text{CH}_2 / \text{CH}_3$ group
1270, 1257	$\nu_s(\text{COO})$
1099	$\nu(\text{Si-O-Si})$
929	$\nu(\text{Si-O-C})$
1029, 1003, 975	$\nu_a(\text{B-O})/\nu(\text{C-O})$
769, 737, 694	$\nu_s(\text{B-O})$