Electronic Supporting Information

Atiya N. Jordan, Susmita Das, Noureen Siraj, Sergio L. de Rooy, Min Li, Bilal El-Zahab, Lin Chandler, Gary A. Baker, Isiah M. Warner

a Department of Chemistry, Louisiana State University, Baton Rouge, LA 70803, b Horiba Scientific, 3880 Park Avenue, Edison, New Jersey 08820, and c Department of Chemistry, University of Missouri, Columbia, MO 65211

*To whom correspondence should be addressed. Phone: (225) 578-2829; FAX: (225) 578-3971; Email: iwarner@lsu.edu.

Current address:
‡ Min Li, Albemarle Corporation, 451 Florida St, Baton Rouge, LA 70801
§ Bilal El-Zahab, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139
Table S1. Elemental analysis of PIC-based GUMBOS.

<table>
<thead>
<tr>
<th>PIC-based GUMBOS</th>
<th>C</th>
<th>H</th>
<th>N</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory</td>
<td>Found</td>
<td>Theory</td>
<td>Found</td>
</tr>
<tr>
<td>[PIC][NTf₂]</td>
<td>49.37%</td>
<td>49.61%</td>
<td>3.79%</td>
<td>3.81%</td>
</tr>
<tr>
<td>[PIC][BETI]</td>
<td>45.86%</td>
<td>46.19%</td>
<td>3.25%</td>
<td>3.24%</td>
</tr>
</tbody>
</table>

Characterization by $^{13}$C NMR and $^{19}$F NMR

$[^{13}]$C NMR (400MHz, $[D_6]$ DMSO), δ (ppm): 153.52 (s), 139.18 (s), 138.39 (s), 133.30 (s), 129.76 (s), 125.55 (s), 122.15 (s), 116.86 (s), 89.51 (s), 44.79 (s), 12.26 (s). $^{19}$F NMR (250MHz, $[D_6]$ DMSO), -79.17 (s).

$[^{13}]$C NMR (400MHz, $[D_6]$ DMSO), δ (ppm): 153.53 (s), 139.04 (s), 138.39 (s), 133.29 (s), 129.76 (s), 125.54 (s), 125.07 (s), 122.15 (s), 116.86 (s), 89.51 (s), 44.78 (s), 12.26 (s). $^{19}$F NMR (250MHz, $[D_6]$ DMSO), δ (ppm): -78.99 (s), -117.85 (s).

Figure S1. POM of [PIC][NTf₂] (top) and [PIC][BETI] (bottom) nanoGUMBOS at various angles 0° (a,b) and 45° (c,d). The scale bars are 50 µm.
Figure S2. Absorption spectra of [PIC][NTf₂] nanoGUMBOS at various concentrations.