Figure S1: N₂ sorption derived pore size distributions and cumulative pore volumes of molecular precursor derived carbons: a,b) Glu-H₃BO₃; c,d) Glu-H₃PO₄; e,f) IL-H₃PO₄. Pore size distributions and cumulative pore volumes of polymeric precursor derived carbons: g,h) Coco-H₃BO₃; i,j) Coco-H₃BO₃; k,l) PANI-H₃PO₄; m,n) Coco-borax-H₃BO₃.
Figure S2: CO₂ sorption derived pore size distributions and cumulative pore volumes of molecular precursor derived carbons: a,b) Glu-H₃BO₃; c,d) Glu-H₃PO₄; e,f) IL-H₃PO₄. Pore size distributions and cumulative pore volumes of polymeric precursor derived carbons: g,h) Coco-H₃BO₂; i,j) Coco-H₃BO₂; k,l) PANI-H₃PO₄; m,n) Coco-borax-H₃BO₃.
Figure S3: TEM images of a) Glu-H$_3$PO$_4$-1:1, b) Glu-H$_3$PO$_4$-1:5, c) Glu-H$_3$BO$_3$-1:1, d) Glu-H$_3$BO$_3$-1:5, e) IL-H$_3$PO$_4$-1:1, f) IL-H$_3$PO$_4$-1:5, g) Coco-H$_3$BO$_3$-1:1, h) Coco-H$_3$BO$_3$-1:5, i) Coco-borax-H$_3$BO$_3$-1:1, j) Coco-borax-H$_3$BO$_3$-1:5, k) Coco-H$_3$PO$_4$-1:1, l) Coco-H$_3$PO$_4$-1:2.5, m) Coco-H$_3$PO$_4$-1:5, n) PANI-H$_3$PO$_4$ 1:1, o) PANI-H$_3$PO$_4$ 1:5.

Table S2: Elemental analysis, N/C ratio, and total yield of all carbon products.

<table>
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<tr>
<th>Sample</th>
<th>C</th>
<th>H</th>
<th>N</th>
<th>S</th>
<th>N/C</th>
<th>Total yield</th>
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<tbody>
<tr>
<td>Coconut</td>
<td>47.88</td>
<td>6.10</td>
<td>&lt;0.1</td>
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<td>-</td>
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<tr>
<td>Glucose (theo.)</td>
<td>40.00</td>
<td>0.06</td>
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<td>-</td>
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<tr>
<td>EMIM DCA (theo.)</td>
<td>54.00</td>
<td>0.66</td>
<td>0.40</td>
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<td>0.01</td>
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<td>PANI</td>
<td>72.68</td>
<td>5.26</td>
<td>14.62</td>
<td>0.76</td>
<td>0.20</td>
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<tr>
<td>Glu-H$_3$PO$_4$ 1:1</td>
<td>62.18</td>
<td>2.14</td>
<td>&lt;0.1</td>
<td>-</td>
<td>32.4</td>
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<tr>
<td>Glu-H$_3$PO$_4$ 1:5</td>
<td>63.80</td>
<td>1.64</td>
<td>&lt;0.1</td>
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<td>27.3</td>
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<tr>
<td>Glu-H$_3$BO$_3$ 1:1</td>
<td>89.72</td>
<td>2.15</td>
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<td>24.1</td>
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<tr>
<td>Glu-H$_3$BO$_3$ 1:5</td>
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<td>1.88</td>
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<td>27.4</td>
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<tr>
<td>IL-H$_3$PO$_4$ 1:1</td>
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<td>8.49</td>
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<td>2.13</td>
<td>0.17</td>
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<tr>
<td>Coco-H$_3$BO$_3$ 1:5</td>
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<td>0.26</td>
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<tr>
<td>PANI-H$_3$PO$_4$ 1:1</td>
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<td>2.25</td>
<td>0.23</td>
<td>-</td>
<td>27.5</td>
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</table>
Figure S4: Powder XRD patterns of carbons synthesized from molecular precursors: a,b) Glu-H$_3$BO$_3$; c,d) Glu-H$_3$PO$_4$; e,f) IL-H$_3$PO$_4$. The patterns of polymeric precursor derived carbons are shown in: g,h) Coco-H$_3$BO$_3$; i,j,k) Coco-H$_3$PO$_4$; l,m) PANI-H$_3$PO$_4$; n,o) Coco-borax_H$_3$BO$_3$. 