Supporting Information

Controlled network structure and its correlation with physical properties of polycarboxyl octaphenylsilsesquioxanes-based inorganic-organic polymer nanocomposites

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Fig. 3S LC spectrum of cleaved products of COOH_{5.5}OPS

Fig. 4S LC spectrum of cleaved products of COOH_{7.0}OPS

Fig. 5S DSC curves of epoxy resins with different content of polycarboxyl-OPS
<table>
<thead>
<tr>
<th>LC/MS Peak/(min)</th>
<th>Cleaved products</th>
<th>Structure</th>
<th>(mol%)</th>
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<td><img src="image1" alt="Phenol structure" /></td>
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<td>13.53</td>
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<td>16.02</td>
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<td><img src="image3" alt="Hydroxybenzoic acid structure" /></td>
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<td>33.25, 33.78</td>
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<td><img src="image5" alt="Dibromo hydroxybenzoic acid structure" /></td>
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**Table 2S.** LC-MS data of cleaved products of COOH$_{7,0}$OPS

<table>
<thead>
<tr>
<th>LC/MS Peak/(min)</th>
<th>Cleaved products</th>
<th>Structure</th>
<th>(mol%)</th>
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<td>31.74, 32.31 35.36, 36.52</td>
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<td><img src="image" alt="Dibromo hydroxybenzoic acid Structure" /></td>
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</table>
**Fig. 1S** FTIR of polybromo-OPS of (a) Br$_{6.4}$OPS, (b) Br$_{9.0}$OPS
**Fig. 2S** FTIR of polycarboxyl-OPS of (a) COOH$_{5.5}$OPS, (b) COOH$_{7.0}$OPS
Fig. 3S  LC spectrum of cleaved products of COOH$_{5.5}$OPS
**Fig. 4S** LC spectrum of cleaved products of COOH$_{5.5}$OPS
**Fig. 5S** DSC curves of epoxy resins with different content of polycarboxyl-OPS