

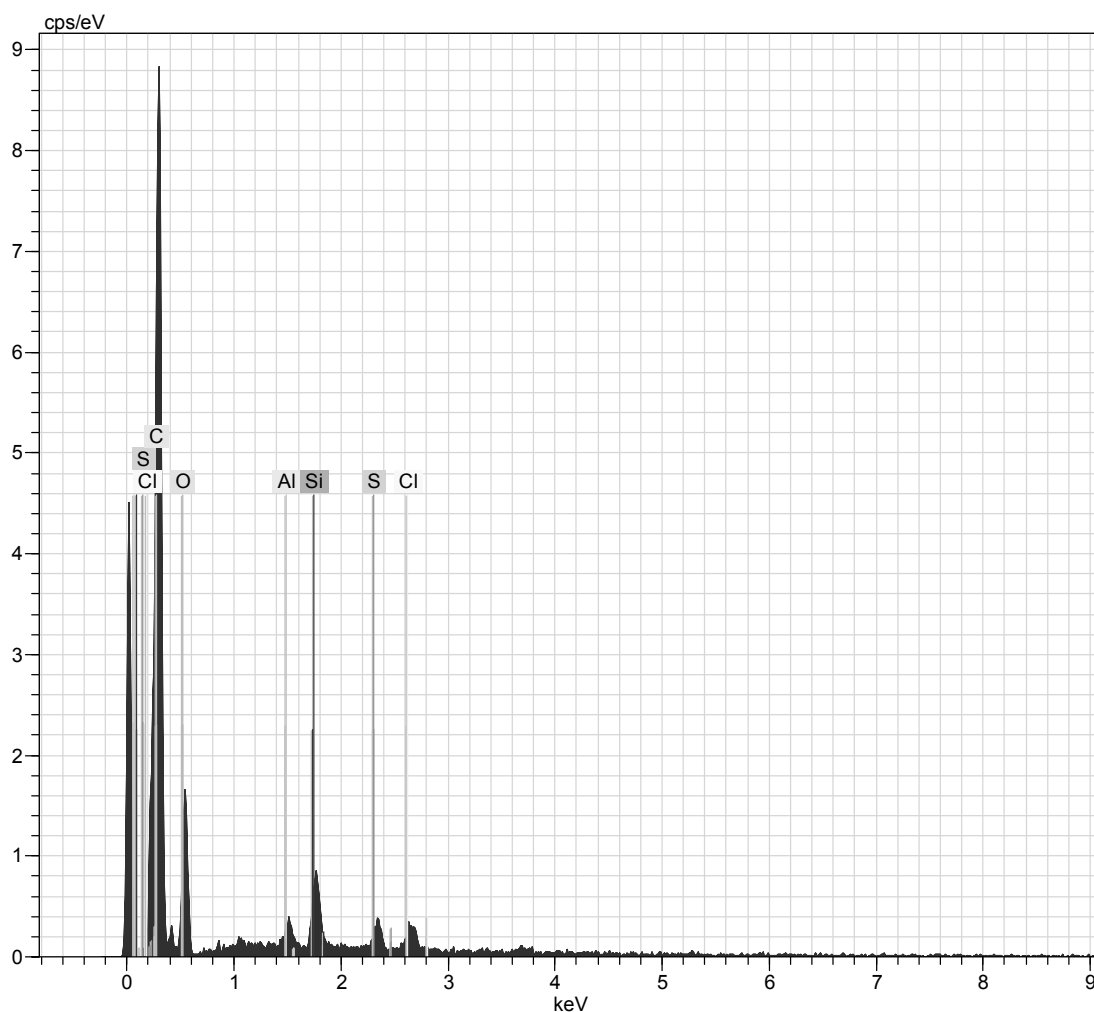
## Supported Ionic Liquid Silica Nanoparticles (SILnPs) as an Efficient and Recyclable Heterogeneous Catalyst for the Dehydration of Fructose to 5-Hydroxymethylfurfural

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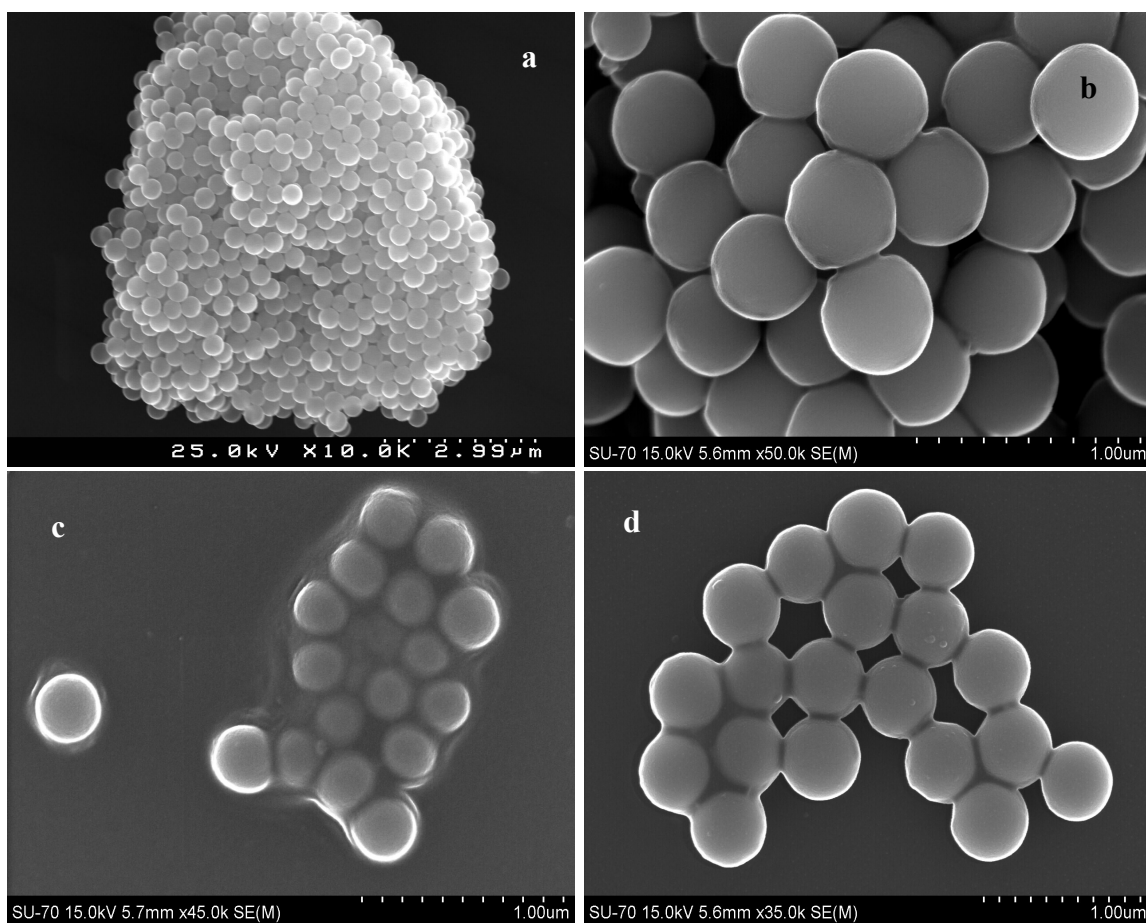
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### Supporting information:

EDX analysis of ionic liquid immobilized silica nanoparticles shows the presence of sulphur species, which indicated that IL covered the surface of silica support.



EDS pattern of ionic liquid immobilized silica nanoparticles Si-2-IL-HSO<sub>4</sub> sample.



SEM images of (a) Si-1, (b) Si-3, (c) Si-1-IL-HSO<sub>4</sub> and (d) Si-3-IL-HSO<sub>4</sub> samples.

Table. Level of variables for central composite design 2<sup>2</sup> for fructose dehydration using Si-3-IL-HSO<sub>4</sub> sample.

Variables	Levels				
	-1.414	-1	0	1	+1.414
C (mg) X1	15.9	20	30	40	44.1
T (°C) X2	81.8	90	110	130	138.2