

Supplementary data for:

**Mesoporous Polymeric Ionic Liquid via Confined Polymerization for Laccase
Immobilization towards Efficient Degradation of Phenolic Pollutants**

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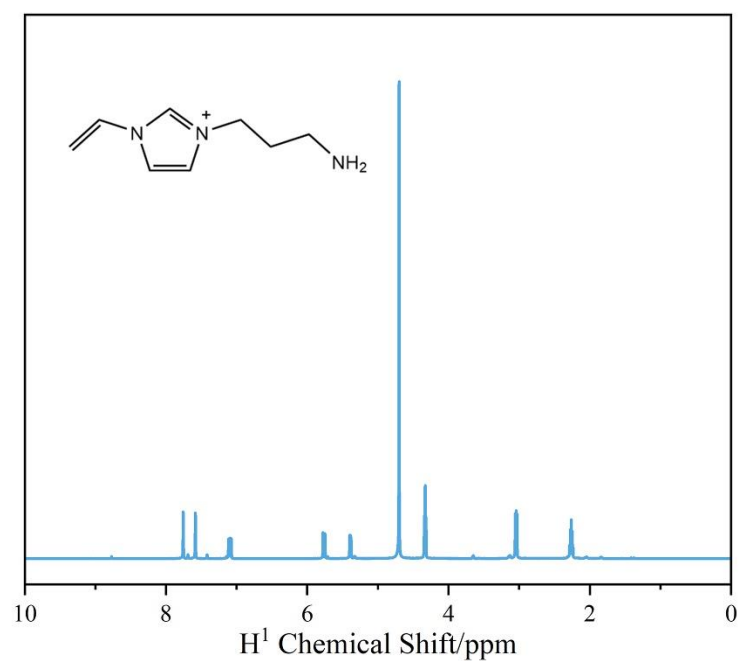


Figure S1. The ^1H NMR of ionic liquids monomer(ILM, [AVIM]Br).

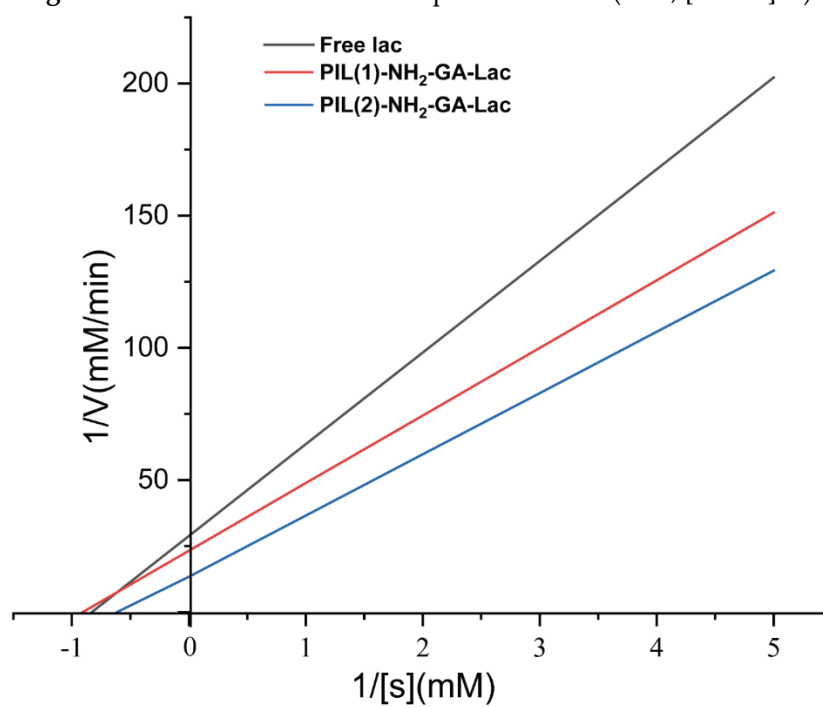


Figure S2. Lineweaver-Burk plots of free laccase and immobilized laccase.

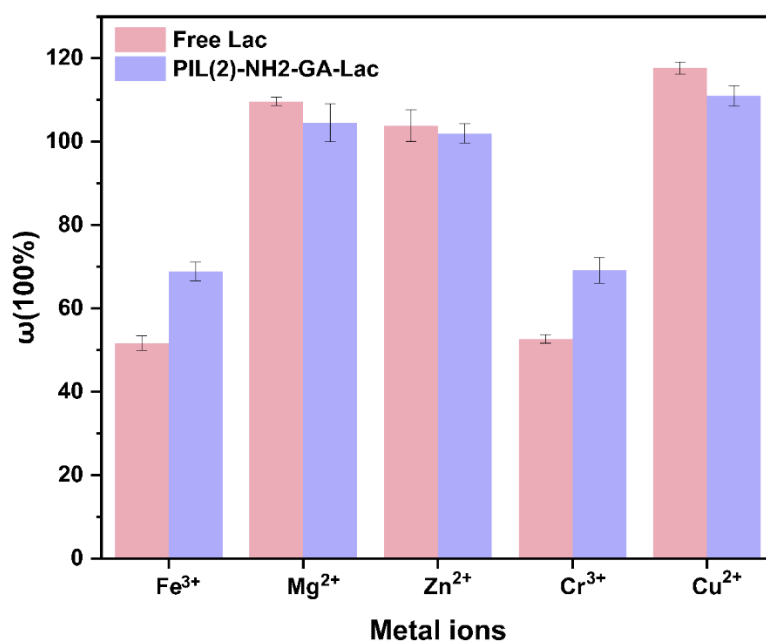


Figure S3. Effect of metal ions on laccase activity.

Table S1. Different support enzyme loading performance and phenol compounds removal rate.

Carrier	Enzyme loading (mg/g)	Storage stability (days, Relative activity)	Cycling stability (Times, Relative activity)	Phenolic compound, removal	Ref.
Cu (II)-chelated chitosan nanoparticles	66	/	8, 50%	Phenol, 87%	[60]
chitosan–clay	75%	42 d, 55%	10, 75%	Phenol, 80%	[24]
Silica	30	/	5, 61%	Catechol, 95%	[13]
Chitosan/poly (vinyl alcohol)	853	10 d, 60%	7, 54%	2,4-DCP, 87.6%	[21]
magnetic nanoparticles	85.8%	30 d, ~80%	6, 83%	Phenol, 86.1%	[36]
PIL-NH ₂	181	15 d, 84%	10, ~80%	2,4-DCP, 90%	This work