Supporting Information

Magnetically recoverable and reusable CuFe$_2$O$_4$ nanoparticles-catalyzed synthesis of benzoxazoles, benzothiazoles and benzimidazoles using dioxygen as oxidant


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EDX spectrum of CuFe$_2$O$_4$ P2

The $^1$H and $^{13}$C NMR spectra of compounds 2a-q 4 and 6 P4
### Analysis Report: Image1-1

<table>
<thead>
<tr>
<th>Elt.</th>
<th>Line</th>
<th>Intensity (c/s)</th>
<th>Atomic %</th>
<th>Conc</th>
<th>Units</th>
<th>Error 2-sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Ka</td>
<td>40.08</td>
<td>43.701</td>
<td>17.473</td>
<td>wt.%</td>
<td>1.057</td>
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<tr>
<td>Fe</td>
<td>Ka</td>
<td>9.94</td>
<td>35.725</td>
<td>49.856</td>
<td>wt.%</td>
<td>5.775</td>
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<tr>
<td>Cu</td>
<td>Ka</td>
<td>0.61</td>
<td>20.574</td>
<td>32.671</td>
<td>wt.%</td>
<td>15.249</td>
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</tbody>
</table>

$kV$ 10.0

Takeoff Angle $35.0^\circ$

Elapsed Livetime 30.0
### Analysis Report: Image1-2

**Elt.** | Line | Intensity (c/s) | Atomic % | Conc | Units | Error 2-sig
---|---|---|---|---|---|---
C | Ka | 0.00 | 0.000 | 0.000 | wt.% | 0.000
O | Ka | 49.35 | 43.990 | 17.288 | wt.% | 0.974
Fe | Ka | 8.88 | 24.916 | 34.177 | wt.% | 4.462
Cu | Ka | 1.17 | 31.094 | 48.535 | wt.% | 16.412

| Total | 100.000 | 100.000 | ct.% |

**kV** 10.0

**Takeoff Angle** 35.0°

**Elapsed Livetime** 30.0
solvent peaks
Solvent peaks
solvent peaks