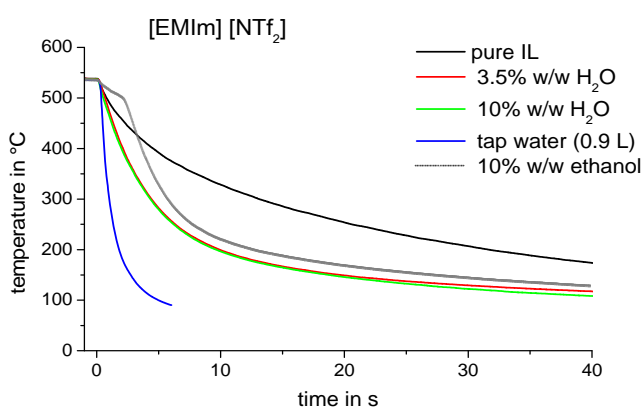


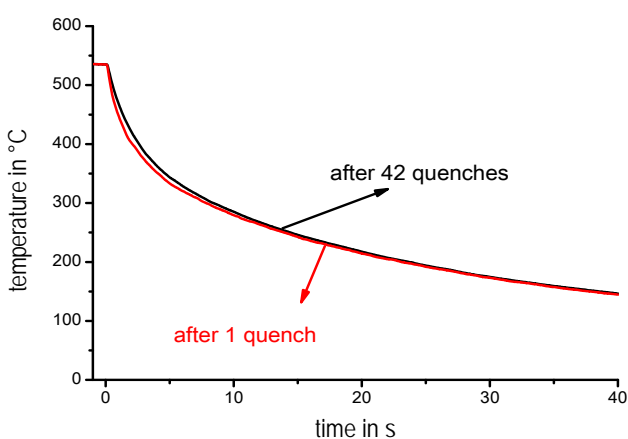
## Supporting Information

# Room temperature ionic liquids in a heat treatment process for metals

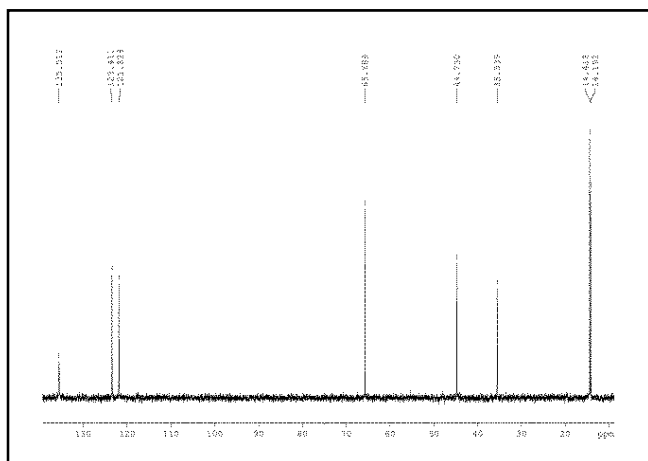
C. Schmidt<sup>a</sup>, M. Beck<sup>b</sup>, M. Ahrenberg<sup>c</sup>, C. Schick<sup>c</sup>, O. Keßler<sup>b</sup> and U. Kragl<sup>a</sup>



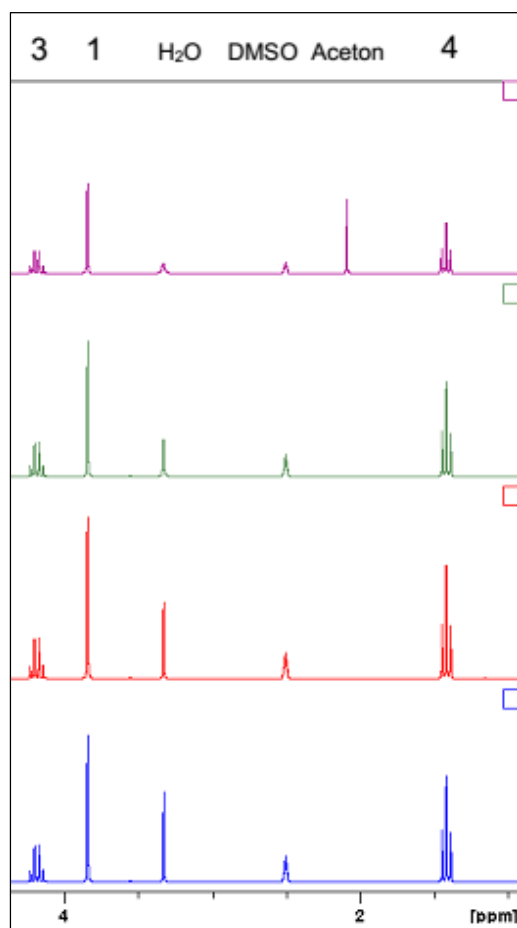
**Figure SI-1:** Quenching curve of aluminium alloy EN AW-6082 at 30 °C with [EMIm][NTf<sub>2</sub>] with 3.5 to 10% w/w H<sub>2</sub>O and 10% w/w EtOH.



**Figure SI-2:** Quenching curves of aluminium alloy EN AW-6082 with [EMIm][NTf<sub>2</sub>] at 30 °C.



**Figure SI-3:**  $^{13}\text{C}$ -NMR-spectra of [EMIm][EtSO<sub>4</sub>] after heating to 550 °C at air for 30 min.



**Figure SI-4:**  $^1\text{H}$ -NMR- -spectra of [EMIm][NTf<sub>2</sub>] after heat treatment (1,41 (t, 3H, J=7,3, CH<sub>3</sub>); 3,84 (s, 3H, CH<sub>3</sub>); 4,18 (q, 2H, J=7,3, CH<sub>2</sub>)) Blue: fresh IL, Red: after 10 steel quenches, Green: after 15 minutes of heating to 550 °C at air , Magenta: after 30 minutes of heating to 550 °C at air.