

Electronic Supplementary Information †

Development of a rapid self-healing semiconducting monoethanolamine based $\text{Mg}(\text{OH})_2$ -metallogel for Schottky diode application with high On/Off ratio †

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Powder X-ray Diffraction Study:

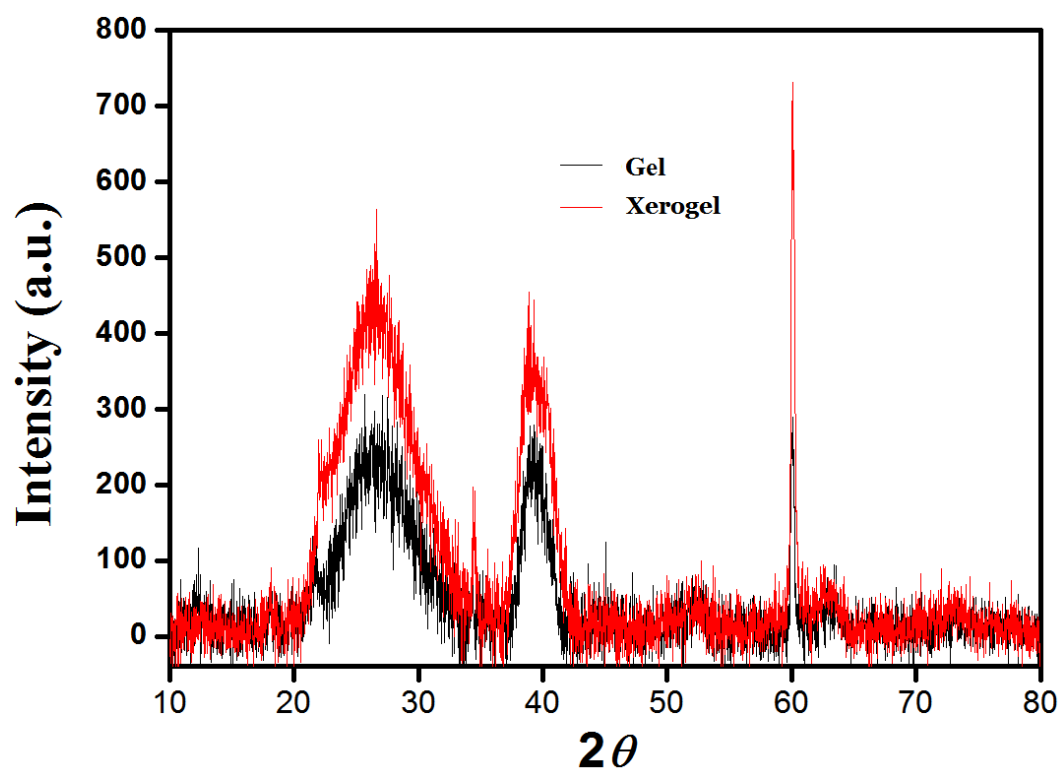


Fig. S1. PXRD patterns of Mg@MEA metallogel in its gel-state and xerogel-form.

NMR Studies of Mg@MEA metallogel:

Mg@MEA: White gel; ^1H NMR (400 MHz, $\text{DMSO-}d_6$): δ 3.44-3.47 (t, 1H, $J = 12\text{Hz}$), 2.72-2.69 (t, 1H); ^{13}C NMR (100 MHz, $\text{DMSO-}d_6$): δ 60.80, 43.08.

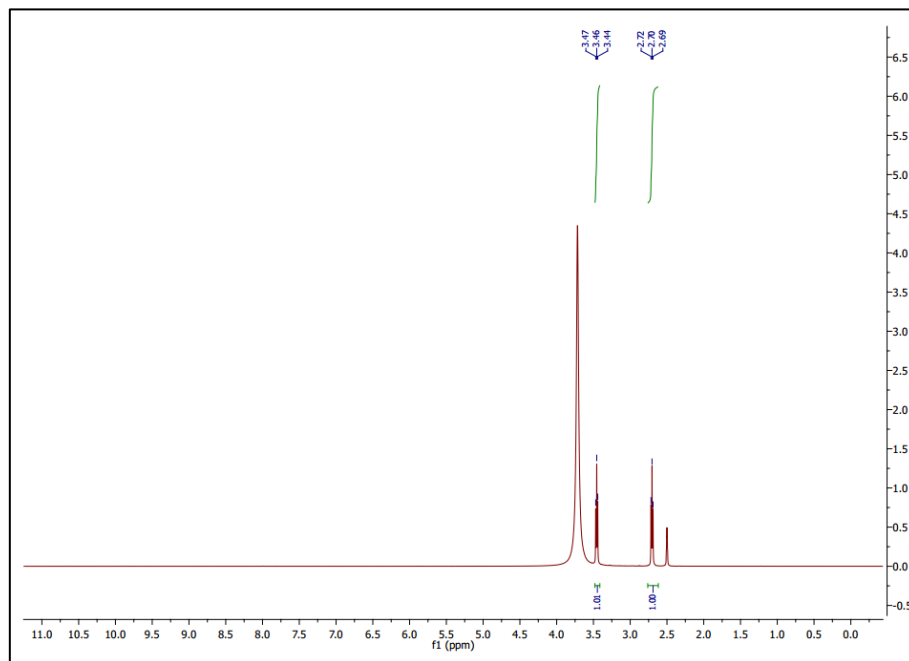


Fig. S2. ^1H -NMR spectra of Mg@MEA metallogel.

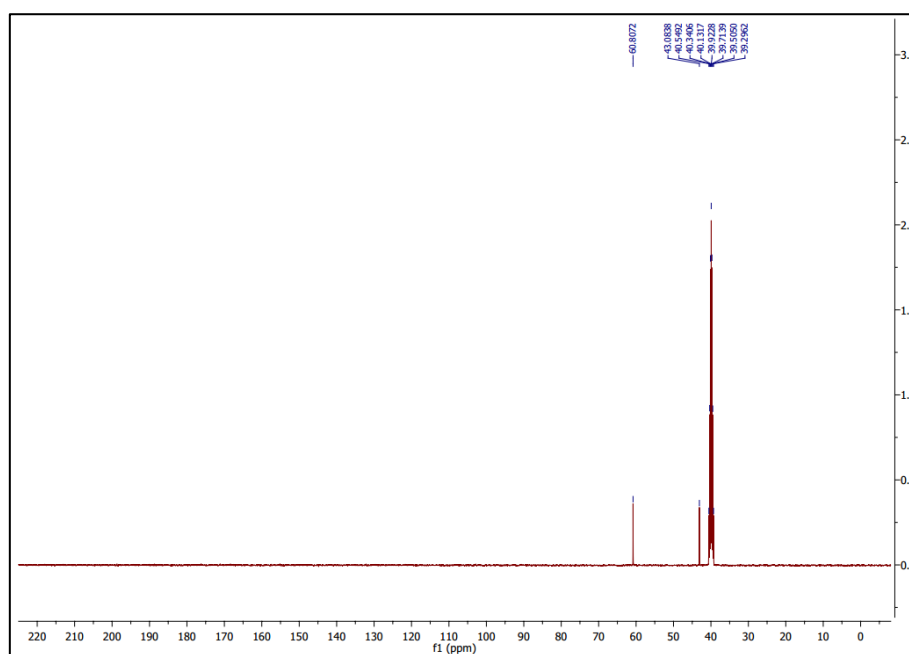


Fig. S3. ^{13}C -NMR spectra of Mg@MEA metallogel.

Infrared spectroscopic analysis:

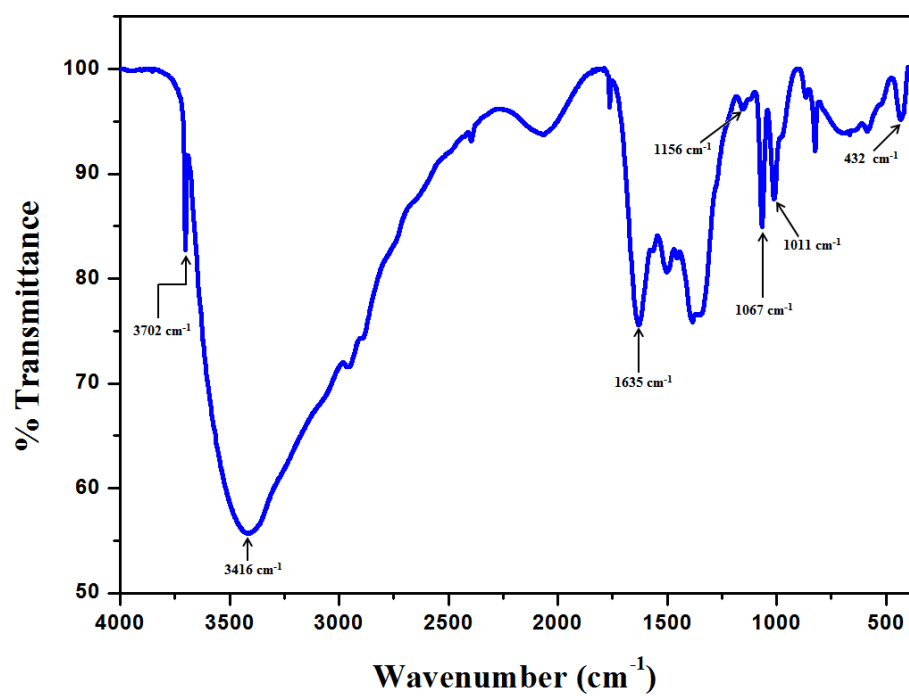


Fig. S4. Infrared-spectral study of Mg@MEA metallogel.