

Fig. S1 Comparison of the (a) tensile-extension plots; and (b) interface bonding strength of $\text{MgCO}_3(24 \text{ h})$ coated Mg and $\text{MgCO}_3(24 \text{ h}) - \text{PCL}$ duplex coated Mg

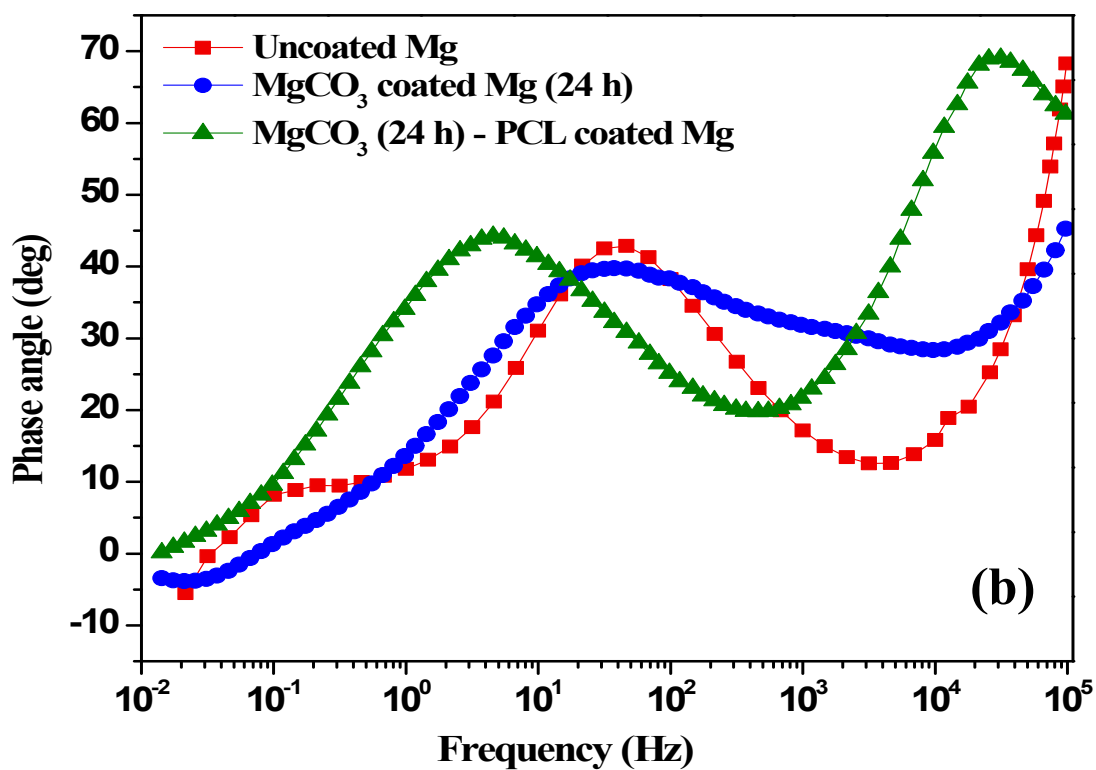
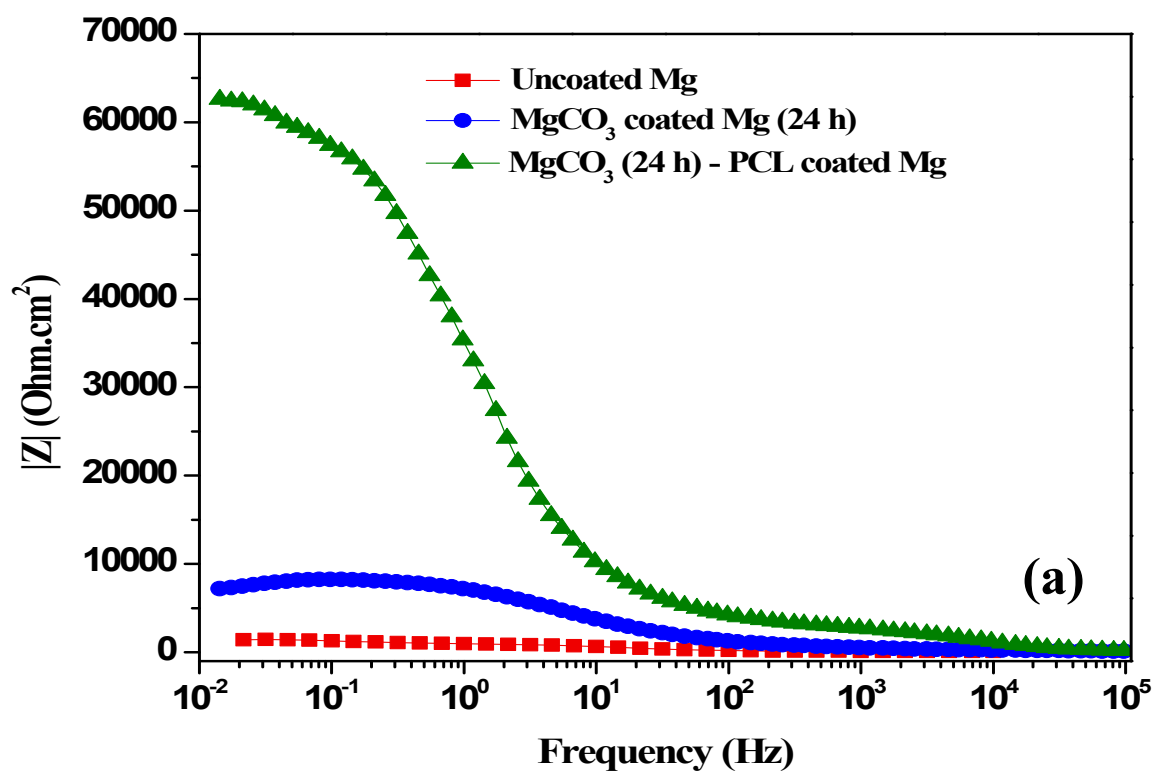


Fig. S2 (a) Bode impedance; and (b) Bode phase angle plots of uncoated Mg, MgCO₃ (24 h) coated Mg and MgCO₃ (24 h) – PCL coated Mg, in HBSS, recorded at their respective open circuit potentials

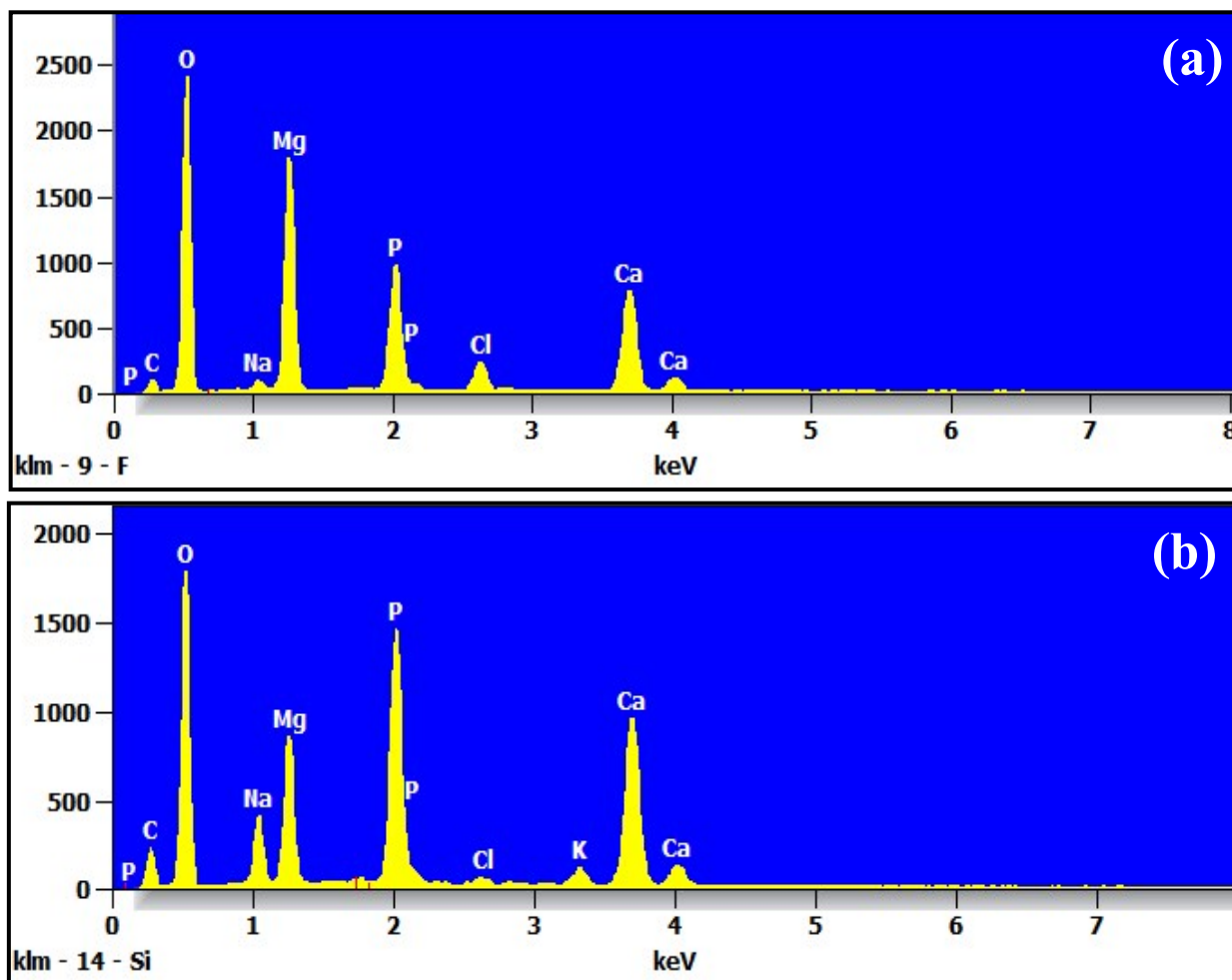


Fig. S3 EDS spectra acquired at the surface of (a) MgCO₃ (24 h) coated Mg; and (b) MgCO₃ (24 h) - PCL coated Mg after immersion in HBSS at 37 ± 1 °C for 10 days

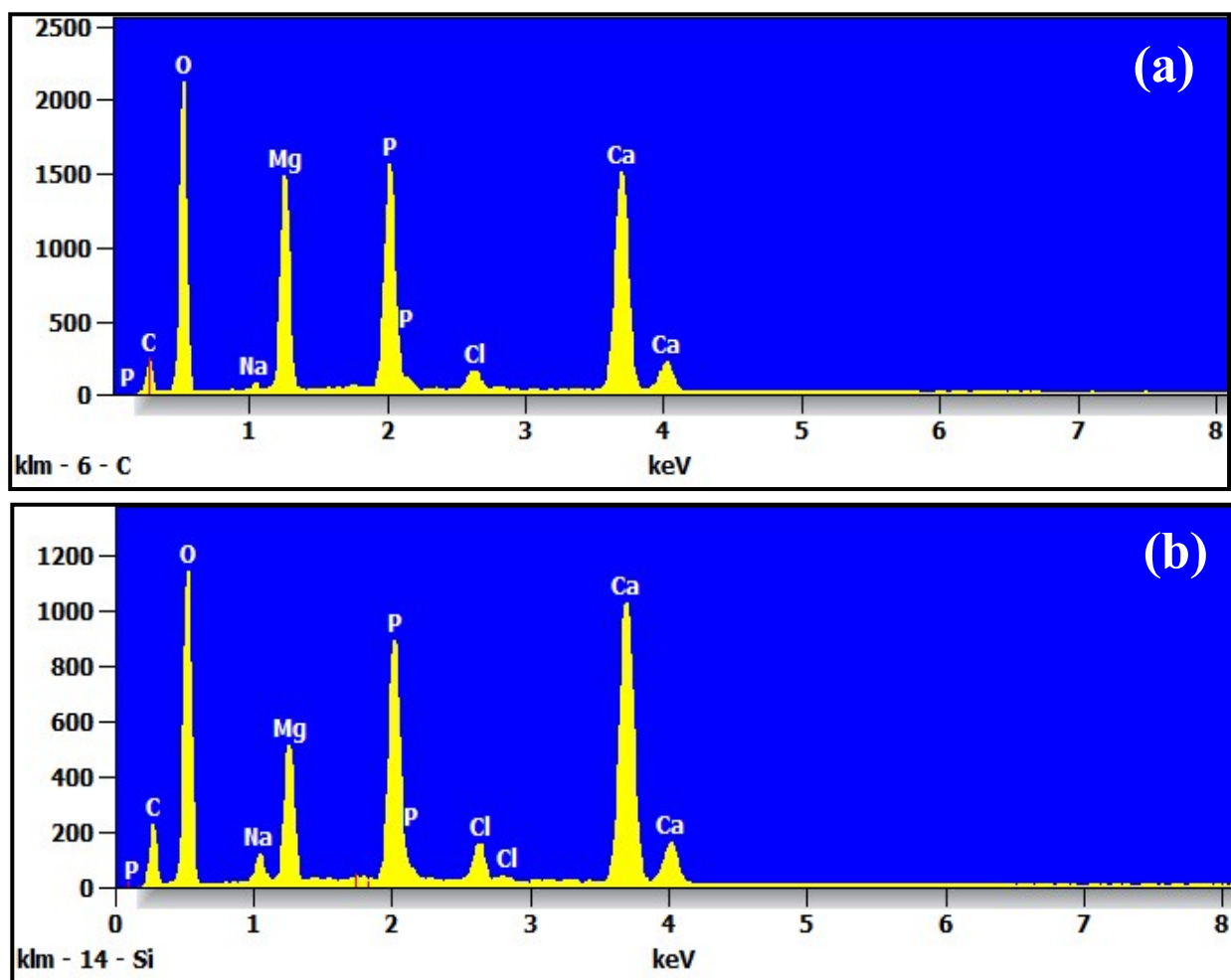


Fig. S4 EDS spectra acquired at the surface of (a) MgCO₃ (24 h) coated Mg; and (b) MgCO₃ (24 h) - PCL coated Mg after immersion in SBF at 37 ± 1 °C for 10 days