

Tuning the electronic environment of zinc ions with a ligand for dendrite-free zinc
deposition in an ionic liquid

Zhen Liu,* Guozhu Li, Tong Cui, Abhishek Lahiri, Andriy Borodin and Frank

Endres*

Supporting Information

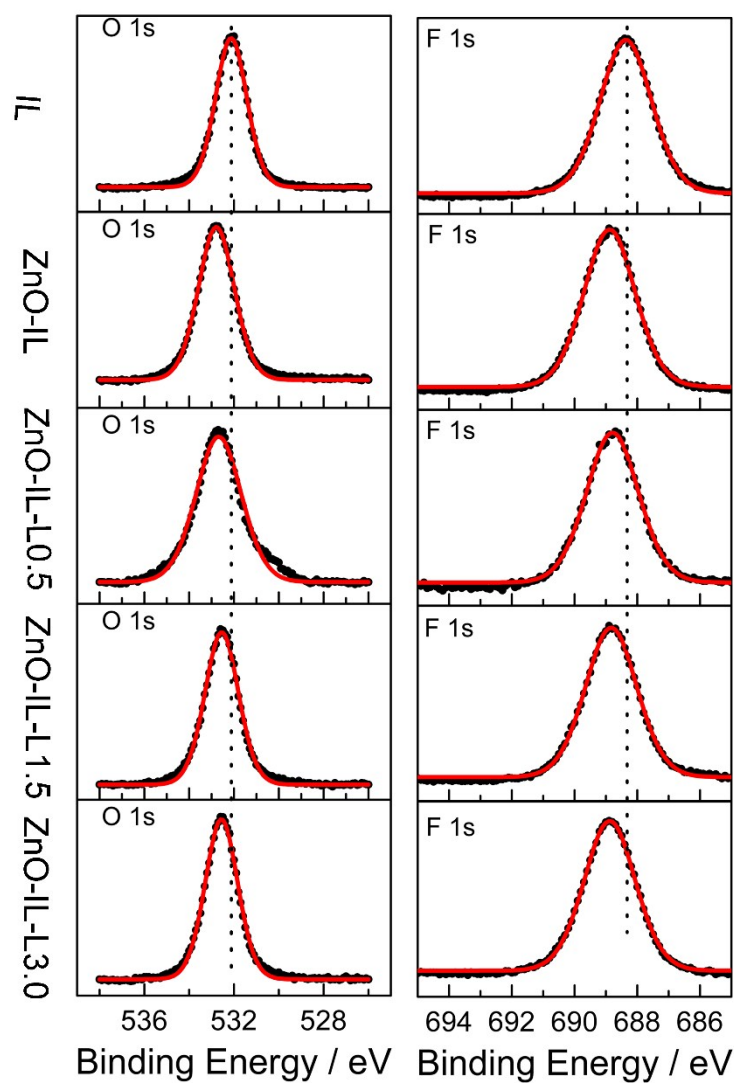


Fig. S1 XPS spectra of neat [EIm]TfO and of 1.5 mol/L ZnO/[EIm]TfO containing

various concentrations of 2-methylimidazole (2-MIm) in the O1s and F1s regions.

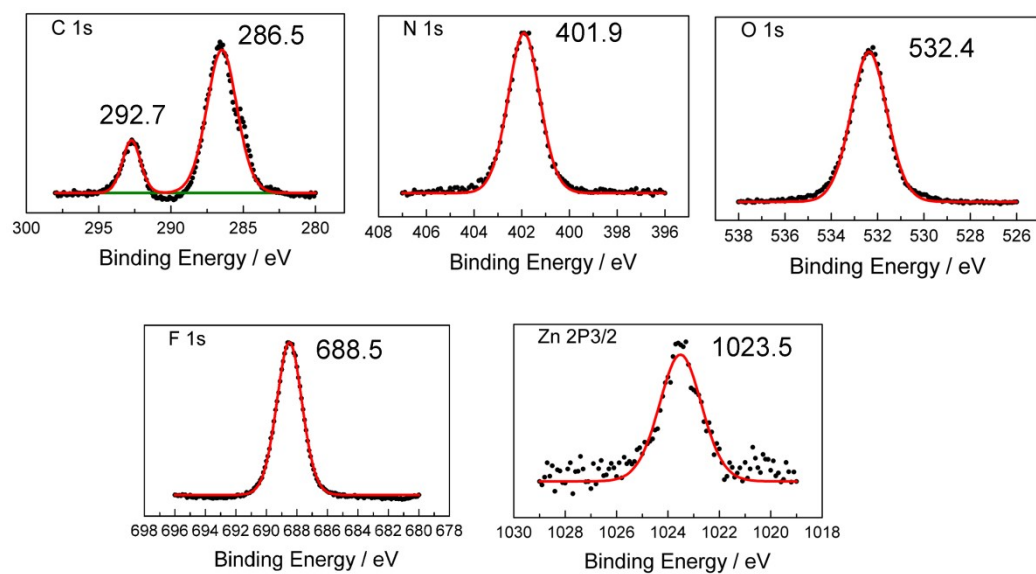


Fig. S2 XPS spectra of 0.2 mol/L Zn(TfO)₂/[EIm]TfO in the C1s, N1s, O1s, F1s and Zn2P_{3/2} regions.

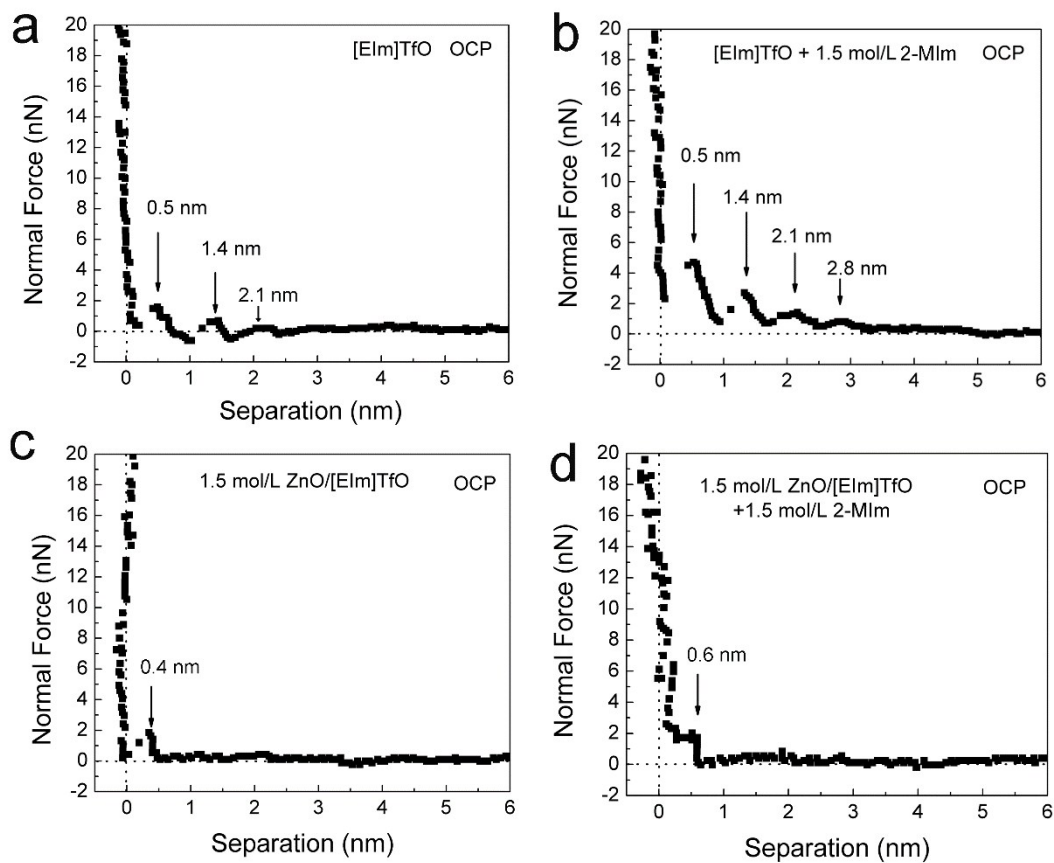


Fig. S3 AFM force-distance profiles for a silica cantilever approaching an Au(111) surface at OCP in (a) [EIm]TfO, (b) 1.5 mol/L 2-MIm/[EIm]TfO, (c) 1.5 mol/L ZnO/[EIm]TfO and (d) 1.5 mol/L ZnO/[EIm]TfO+1.5 mol/L 2-MIm

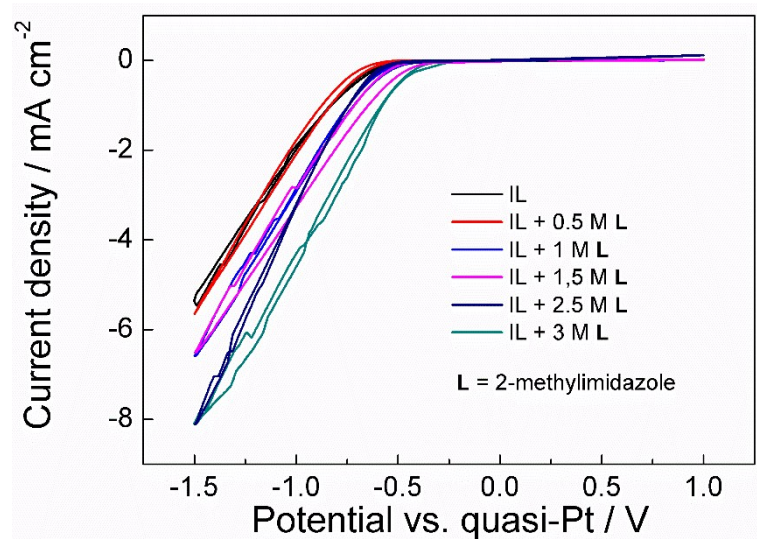


Fig. S4 CVs of [EIm]TfO containing different concentrations of 2-MIm ligand.