

Electronic supplementary information

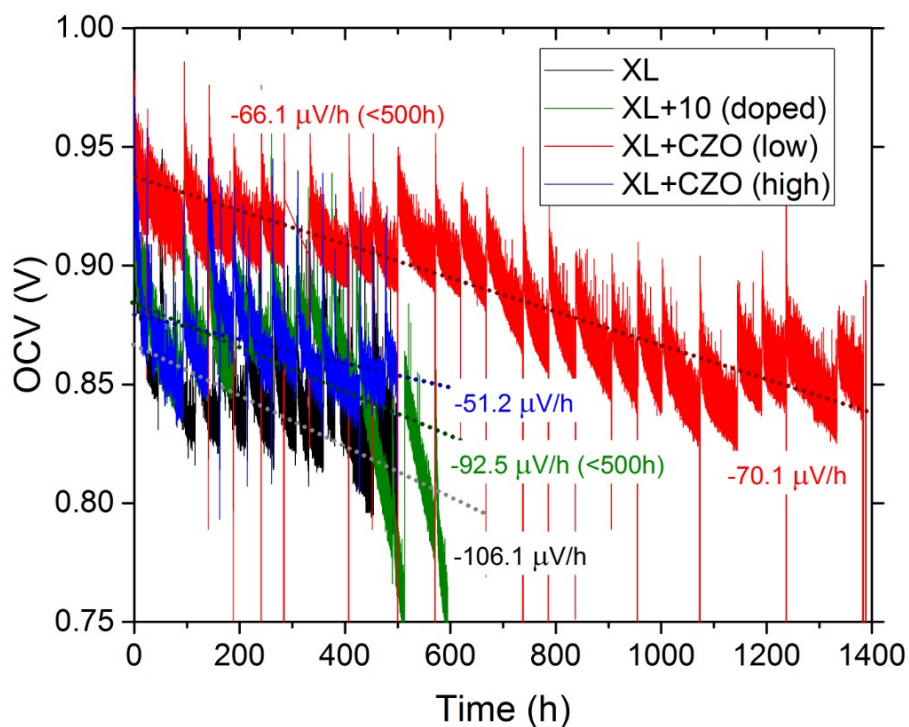


Figure S.1. Open circuit voltage (OCV) of each MEA measured during ASTs. The dotted lines represent the OCV decay rates for each MEA, which were obtained using linear regression fits on the first 500 hours of data, when necessary. For the low CZO MEA, OCV decay for the entire test duration is shown.

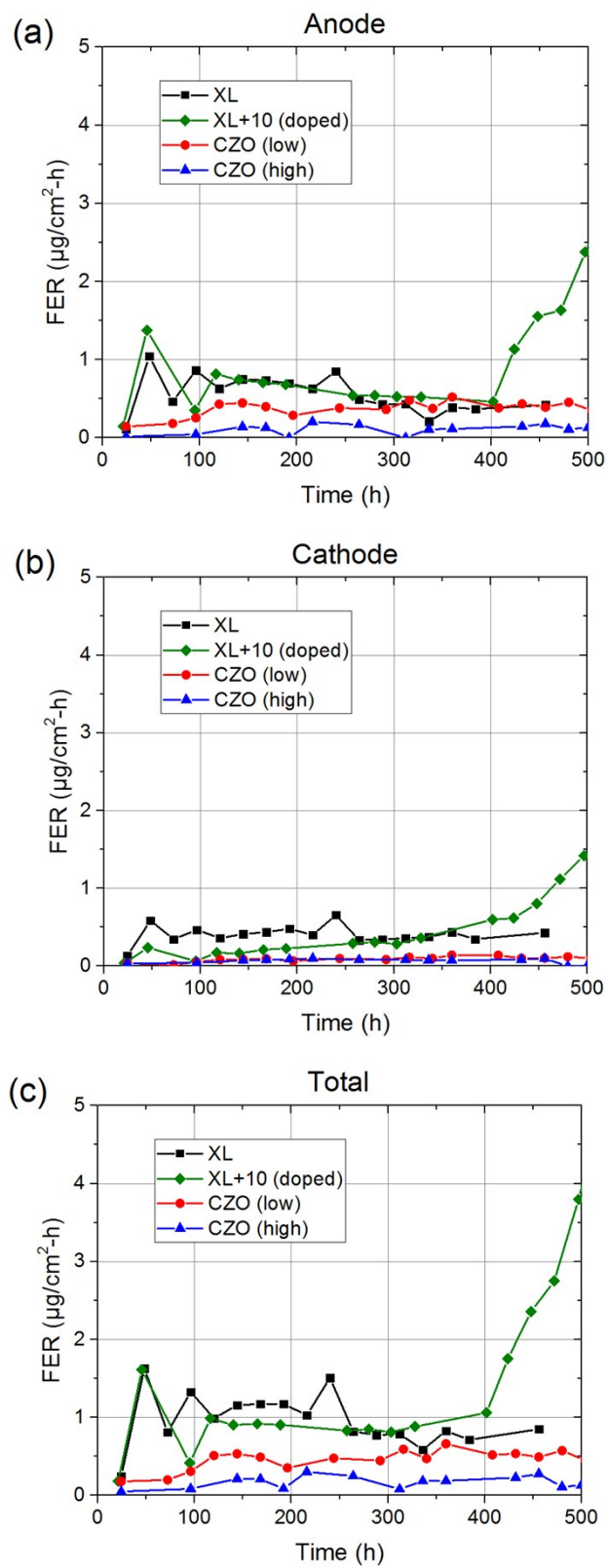


Figure S.2. The fluoride emission rates (FERs) at each time step from the (a) anode side, (b) cathode side, and (c) total MEA (anode+cathode) for each MEA.

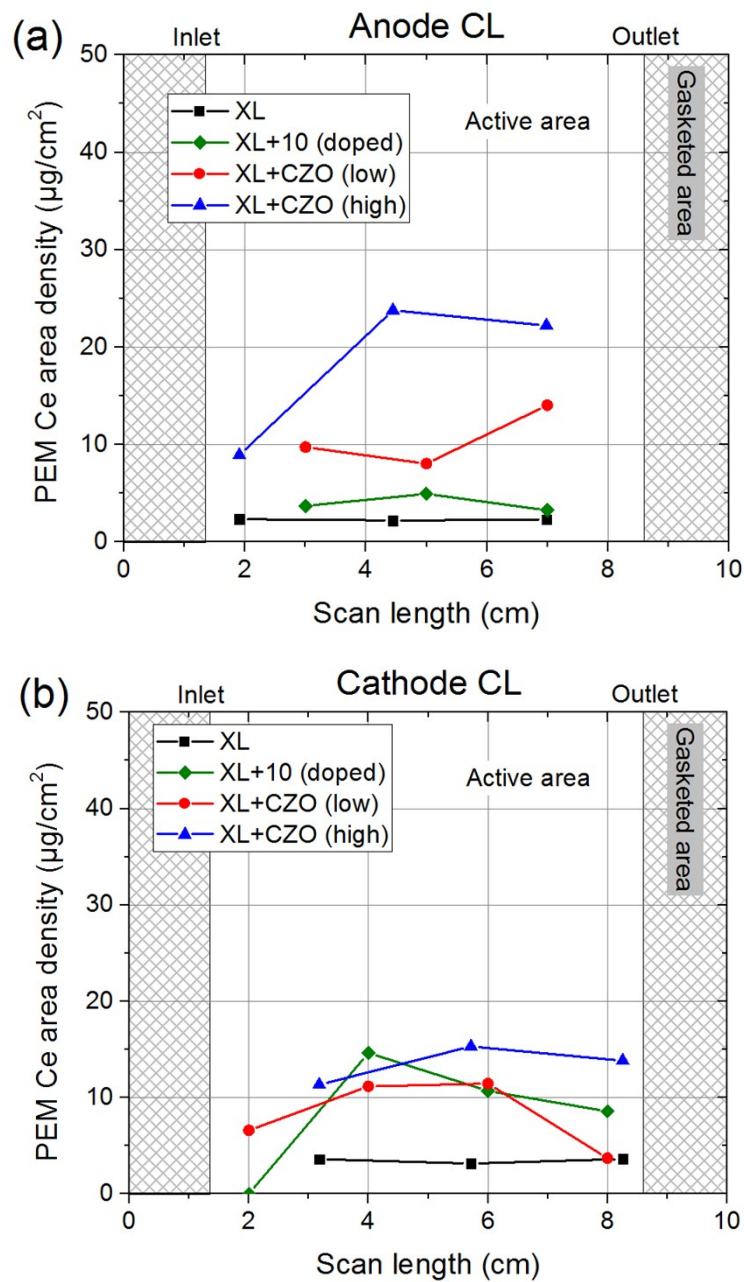


Figure S.3. X-ray fluorescence (XRF) measurement after ASTs of in-plane Ce concentration profiles along the center of the (a) anode and (b) cathode catalyst layers (CLs).