Supporting Information

Evaluation of Ciprofloxacin Destruction between Ordered Mesoporous and Bulk NiMn₂O₄/CF Cathode: Efficient Mineralization in a Heterogeneous Electro-Fenton-like Process

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| Samples | Specific area | Pore volume | Average pore |
|---------------------------------------|----------------------|-----------------------|---------------|
| | $(m^2 \cdot g^{-1})$ | (cc·g ⁻¹) | diameter (nm) |
| meso-NiMn ₂ O ₄ | 262 | 0.33 | 4.63 |
| bulk-NiMn ₂ O ₄ | 55 | 0.18 | 9.32 |

Table S1. The BET specific area, pore volume, and average pore diameter of catalysts

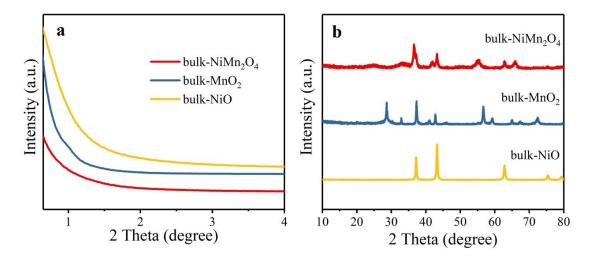


Fig. S1 (a) Low angle XRD patterns and (b) wide angle XRD patterns of bulk- $NiMn_2O_4$, bulk- MnO_2 and bulk-NiO.

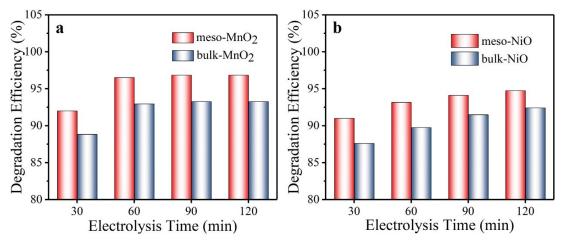


Fig. S2 Degradation efficiency of CIP with various catalysts/CF cathodes in EF-like process. (a) meso-MnO₂/CF and bulk-MnO₂/CF. (b) meso-NiO and bulk-NiO.

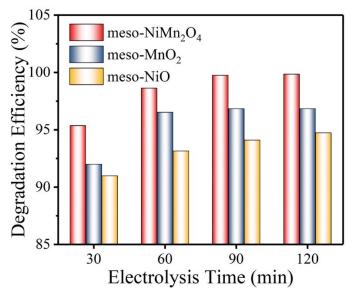


Fig. S3 Degradation efficiency of CIP with meso- MnO_2/CF , meso-NiO/CF and meso- $NiMn_2O_4/CF$ cathodes in EF-like process.

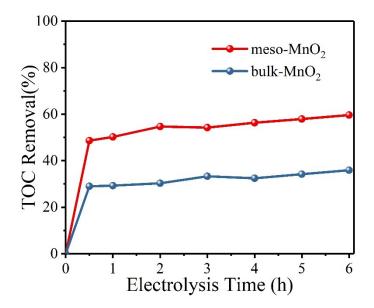


Fig. S4 TOC removal of CIP with meso-MnO₂/CF and bulk-MnO₂/CF cathodes in EF-like process.

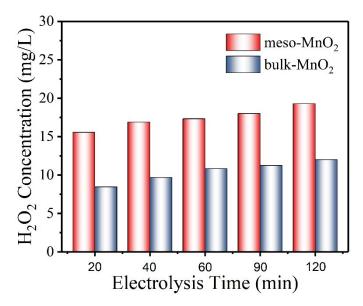


Fig. S5 The concentration of in situ electro-generated H_2O_2 with meso-MnO₂/CF and bulk-MnO₂/CF cathodes in EF-like process.

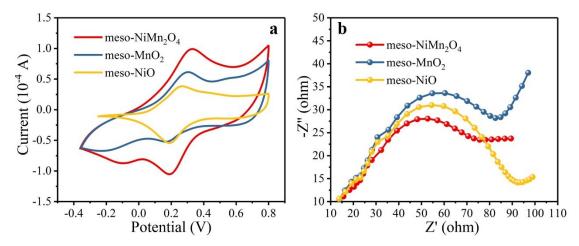


Fig. S6 (a) Cyclic voltammetry curves and (b) EIS Nyquist plots of meso-Ni Mn_2O_4 , meso- MnO_2 and meso-NiO.

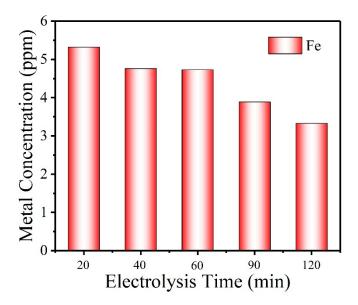


Fig. S7 The concentration of Fe element during electrolysis in EF-like process.

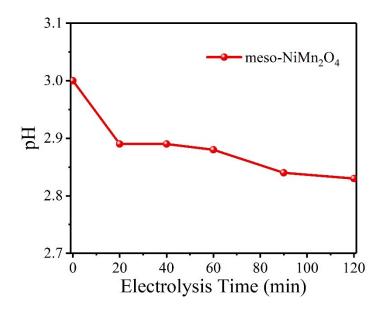


Fig. S8 The pH of solution during electrolysis in EF-like process with meso-Ni Mn_2O_4/CF cathode.