Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels.

Supplementary information

Investigating the Stable Operating Voltage for $MnFe_2O_4$ Li-ion Battery Anode

Sourav Ghosh [a, d, *], Timothy de Donder [b], Klas Gunnarsson [c], V. Kiran Kumar [d], Surendra K. Martha [d], Peter Svedlindh [c], Vadim G. Kessler,[b] Gulaim A. Seisenbaeva [b *], Vilas G. Pol[a *]

[a] *Davidson School of Chemical Engineering, Purdue University, West Lafayette, IN, 47907, USA*

[b] *Department of Molecular Sciences, Swedish University of Agricultural Sciences, BioCenter, Almas allé 5, Box 7015, SE-75007 Uppsala, Sweden*

[c] *Department of Materials Science and Engineering, Uppsala University, Box 35, SE-75103 Uppsala, Sweden*

[d] *Department of Chemistry, Indian Institute of Technology, Hyderabad, Kandi, Telangana-502285, India.*

*Corresponding Author: vpol@purdue.edu; Gulaim.Seisenbaeva@slu.se; **cy15resch11006@iith.ac.in***

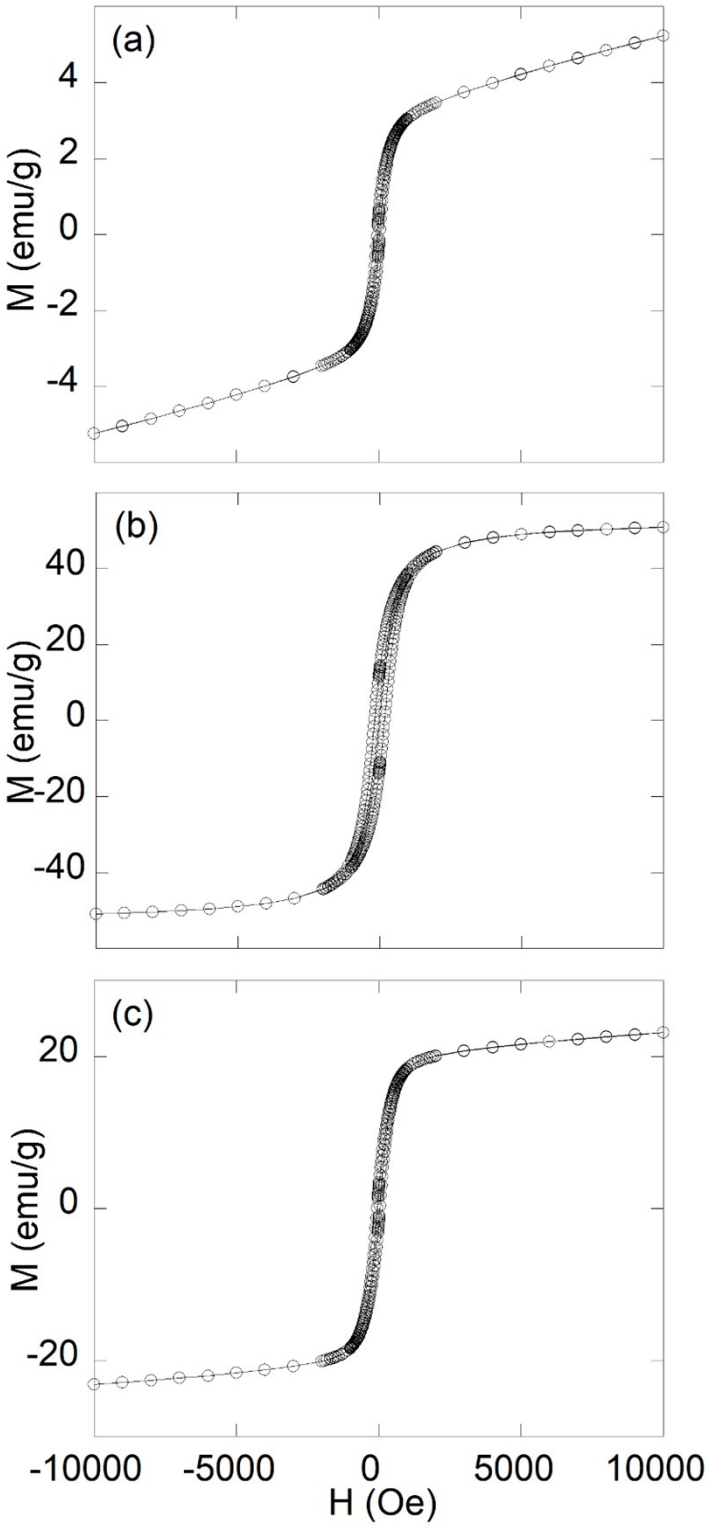

Figure S1. Magnetization versus applied magnetic field recorded at room temperature for (A) $MnFe_2O_4$ obtained at 70°C in 1 h; (B) $MnFe_2O_4$ obtained at 100°C in 1 h; (C) $Mn_{1.5}Fe_{1.5}O_4$ obtained at 100°C in 1h.

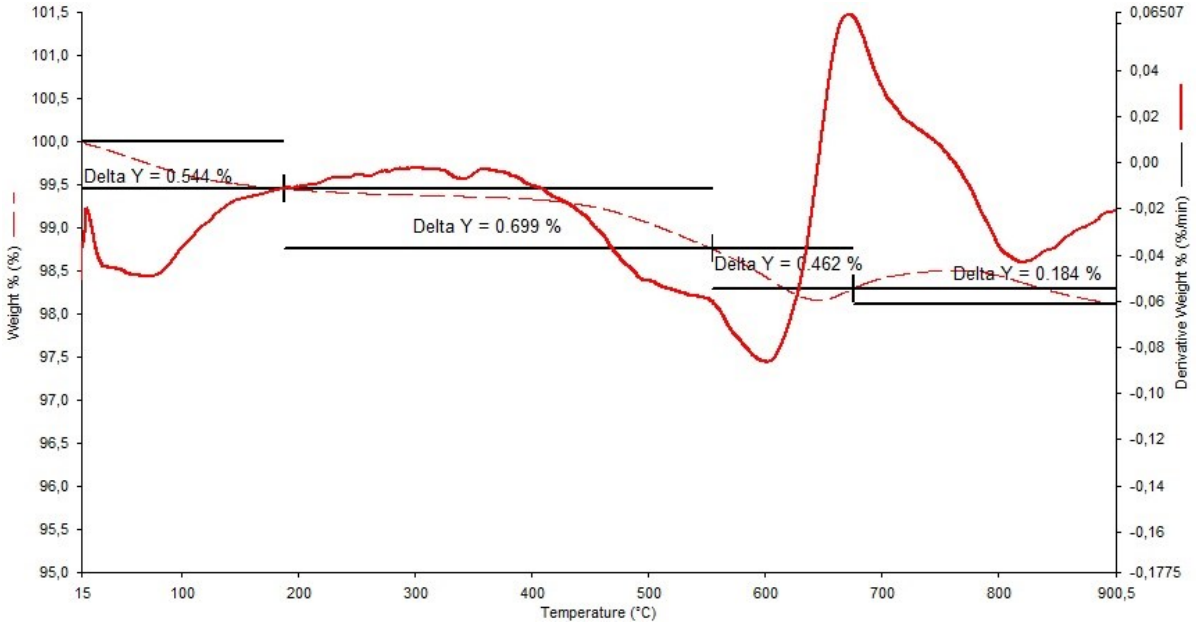

Figure S2. TGA of $MnFe_2O_4$ in air.

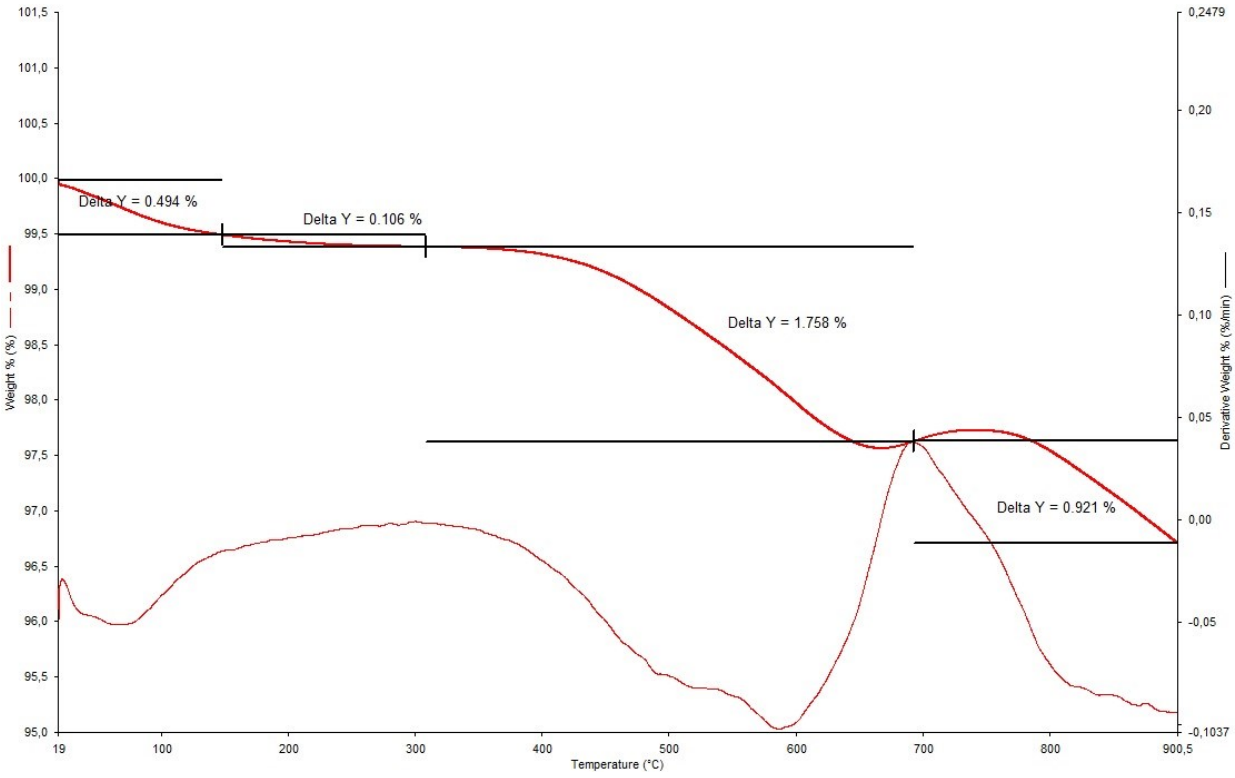

Figure S3. TGA of $MnFe_2O_4$ in nitrogen atmosphere.

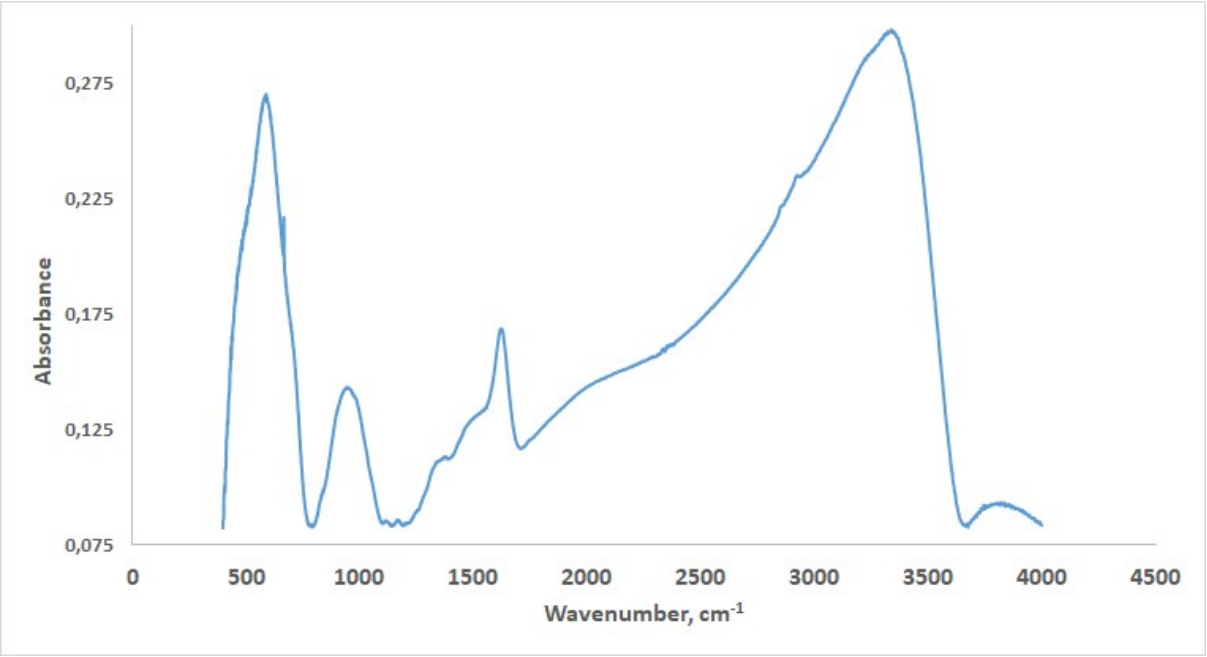

Figure S4. FTIR spectrum of $MnFe_2O_4$ powder.