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**Tavorite LiFePO4OH Hydroxyphosphate as an Anode for**

**Aqueous Lithium-ion Batteries**

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**Supporting Information**

**Table S1.** Redox potentials of some selected cathode and anode materials used for aqueous lithium-ion battery.

**Figure S1.** Thermogravimetric analysis of LiFePO4OH showing the thermal stability of the sample till 400 oC.

**Figure S2.** Raman Spectra of LiFePO4OH showing the PO4-based bands.

**Figure S3.** Cyclic voltammogram of LiFePO4OH recorded between -1.0 V to 1.0 V vs. Ag/AgCl in aqueous 21 m LiTFSi + 7m LiOTf electrolyte.

**Figure S4.** (a) Galvanostatic potential-capacity profile of LiFePO4 half-cell in aqueous 21m LiTFSi + 7m LiOTf electrolyte; (b) Cyclability of the material for the initial 30 cycles.

**Figure S5.** Schematic and pictorial representation of setup of aqueous battery used for electrochemical measurements.

**Table S1.** Redox potentials of some selected cathode and anode materials used for aqueous lithium-ion battery.

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| --- | --- | --- |
| **Material** | **Redox Potential** | **Reference** |
| LiFePO4 | 0.441 V vs. SHE | 1 |
| FePO4 | 0.26 V vs. SHE | 2 |
| LiCoO2 | 0.9 V vs. SHE | 3 |
| LiMnPO4 | 0.991 vs. SHE | 4 |
| VO2 (B) | -0.43 V vs. SHE | 5 |
| TiO2 | -0.9 V vs. SHE | 6 |
| LiV3O8 | -0.584 V vs. SHE | 7 |
| Polyimide | -0.5 V vs. SHE | 8 |
| LiFePO4OH | -0.35 vs. Ag/AgCl | This work |

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