

Magnetometric Characterization of Intermediates in the Solid-State Electrochemistry of Redox-Active Metal-Organic Frameworks

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Materials

| Name | Company | Catalog Number | Comments |
|--|-------------------------|----------------|--------------------------------|
| 1-Methyl-2-pyrrolidone | FUJIFILM Wako Chemicals | 139-17611 | Super Dehydrated |
| 1mol/L LiBF ₄ EC:DEC (1:1 v/v%) | Kishida | LBG-96533 | electrolyte |
| 4-Hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl | FUJIFILM Wako Chemicals | 089-04191 | TEMPOL, for Spin Labeling |
| Ampule tube | Maruemu Corporation | 5-124-05 | 20mL |
| Carbon black, Super P Conductive | Alfa Aesar | H30253 | |
| Conductive Carbon Black | Mitsubishi Chemical | | |
| Copper (II) Nitrate Trihydrate | FUJIFILM Wako Chemicals | 033-12502 | deleterious substances |
| Dimethyl Carbonate | FUJIFILM Wako Chemicals | 046-31935 | battery grade |
| Ethylenediamine | FUJIFILM Wako Chemicals | 053-00936 | deleterious substances |
| Graphene Nanoplatelets | Tokyo Chemical Industry | G0442 | 6-8nm(thick), 15μm(wide) |
| Poly(vinylidene fluoride) | Sigma Aldrich | 182702 | |
| Potassium Bromide | FUJIFILM Wako Chemicals | 165-17111 | for Infrared Spectrophotometry |
| Sodium Alginate | FUJIFILM Wako Chemicals | 199-09961 | 500-600 cP |
| SQUID Magnetometer | Quantum Design | MPMS-XL 5 | |
| Tetrahydroxy-1,4-benzoquinone Hydrate | Tokyo Chemical Industry | T1090 | |
| X-Band ESR | JEOL | JES-F A200 | |