IB Group Metal Ions Insertion into Dandelion-like MnS with Enhanced Catalytic Performance and Morphology Genetic

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Fig. S1: The SEM image of as-prepared MnS



Fig. S2: XRD patterns comparison of Sample **2**, Sample **3**, Sample **4**, Sample **5**, Sample **6**, Sample **7**, Sample **8**, Sample **9** and Sample **10**



Fig. S3: SEM images of Sample **2**, Sample **3**, Sample **4**, Sample **5**, Sample **6**, Sample **7**, Sample **8**, Sample **9** and Sample **10**



Fig. S4: XRD patterns comparison of Sample **2**, Sample **11**, Sample **12**, Sample **13**, Sample **14**, Sample **15** and Sample **16**



Fig. S5: (a) the EDS measurement of the particles on the sample 16; (b) the EDS measurement of the spiny on the sample 16



Fig. S6: SEM images of Sample 2, Sample 11, Sample 12, Sample 13, Sample 14, Sample 15 and Sample 16



Fig. S7: Changes in the UV-vis spectra during the removal of (a) MB by Sample 3 (b) MB by Sample 4, (c) MB by Sample 5, (d) MB by Sample 6, (e) MB by Sample 7, (f) MB by Sample 8, (g) MB by Sample 9, (h) MB by Sample 10



Fig. S8: Changes in the UV-vis spectra during the removal of (a) RB by Sample 3 (b) RB by Sample 4, (c) RB by Sample 5, (d) RB by Sample 6, (e) RB by Sample 7, (f) RB by Sample 8, (g) RB by Sample 9, (h) RB by Sample 10



Fig. S9: Changes in the UV-vis spectra during the removal of (a) MB by P25 (b) RB by P25.



Fig. S10: The SEM images of Sample 2, 10, 16 after repeated degradation of MB and RB for three times.