

Supporting Information

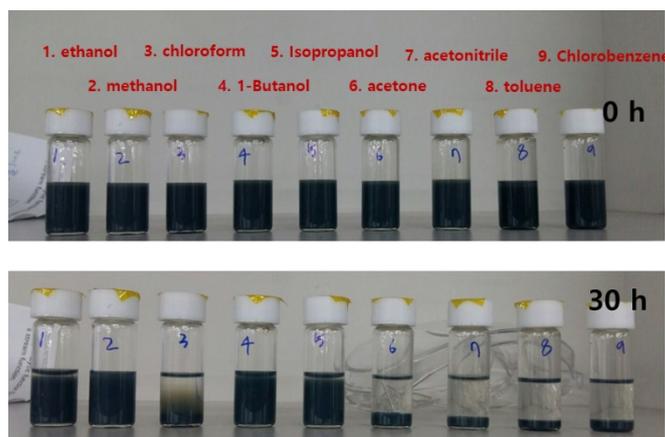


Figure S1. Dispersion of CuCrO₂ nanocrystals in various solvent. All nanocrystals dispersed in solvent at first, however after 30hrs, aggregations of nanocrystals were observed in some solvent. Furthermore, even the solvent of same alcohol group, the degree of dispersion was different. Eventually methanol was decided to dispersive solvent. Concentration of all solution was adjusted as 5mg/ml.

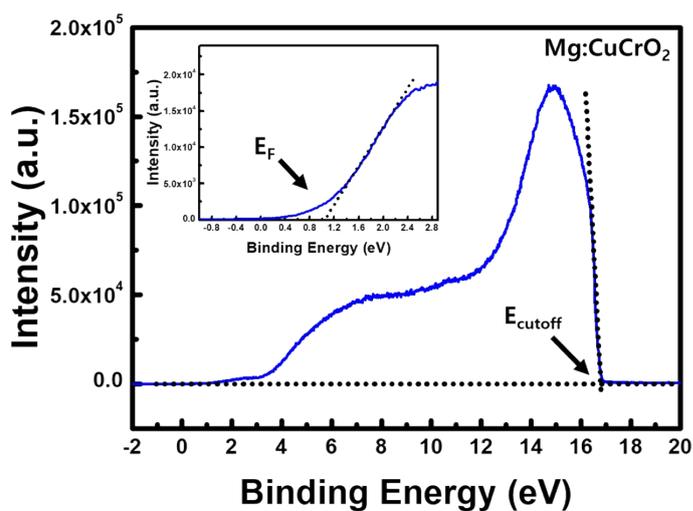


Figure S2. Work function of Mg:CuCrO₂ measured by UPS was estimated 5.46eV. ($\Phi = h\nu - |E_{\text{cutoff}} - E_F|$, He(I) source: 21.22eV, E_F= 1.04eV, E_{cutoff}=16.8eV)

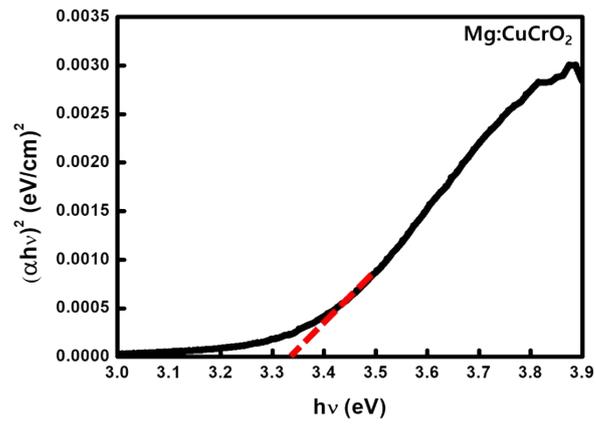


Figure S3. Optical bandgap of Mg:CuCrO₂ measured by UV-Vis spectroscopy. The plot of $(\alpha h\nu)^2$ vs $h\nu$ shows the direct optical bandgap of 3.33 eV.

Acknowledgements

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