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Deep eutectic solvent route synthesis of zinc and copper vanadate *n*-type semiconductors – mapping oxygen vacancies and their effect on photovoltage

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Supporting Information

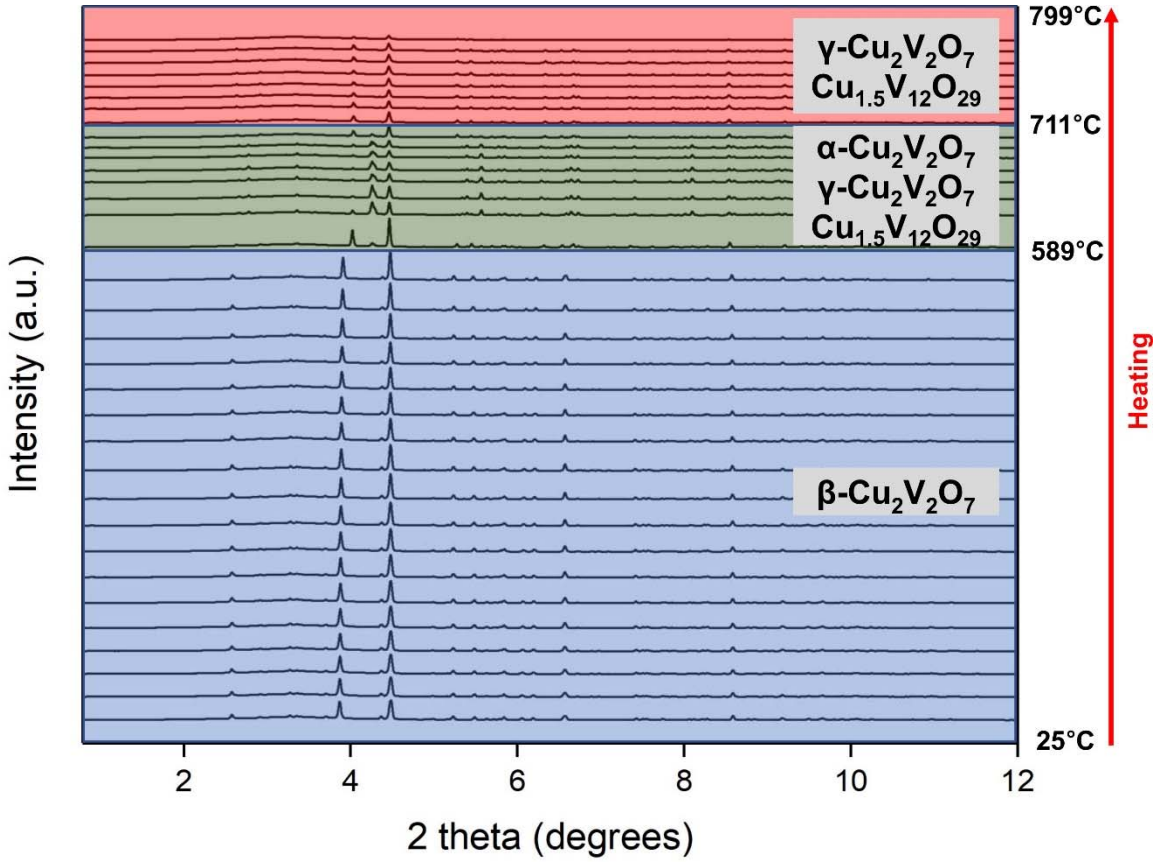

Figure S1. In-situ high-temperature powder X-ray diffraction (HT PXRD) patterns of β-$Cu_2V_2O_7$.

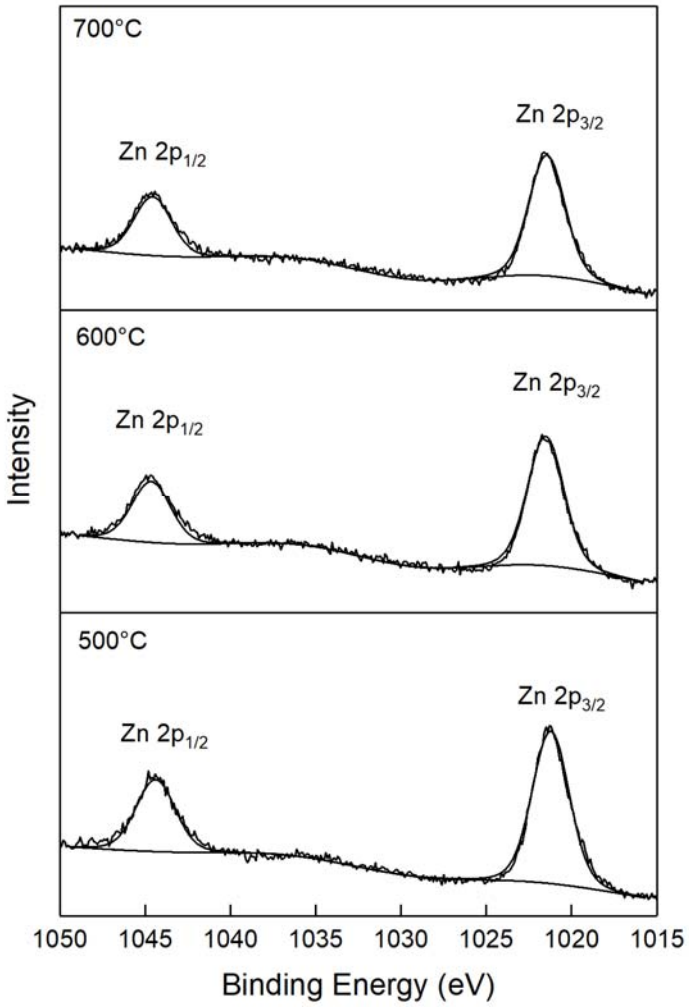

Figure S2. XPS data of the Zn 2*p* region for α-$Zn_2V_2O_7$.

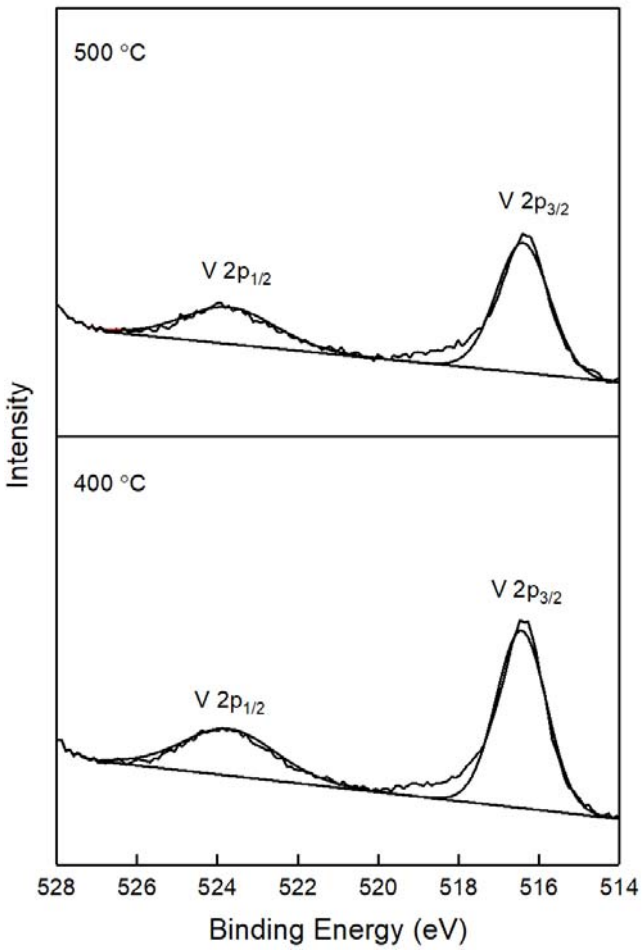

Figure S3. XPS data of the V 2*p* region for β-$Cu_2V_2O_7$.

Table S1. Estimated particle size of α-$Zn_2V_2O_7$ and β-$Cu_2V_2O_7$ calculated by Debye-Scherrer equation and atomic % ratio of V:Zn(Cu) by EDS.

$M_2V_2O_7$	Calcination Temperature (°C)	Particle size (nm)	V:Zn(Cu) ratio[a]
α-$Zn_2V_2O_7$	500	50.5 ± 3.5	1.95(8) : 2
	600	57.4 ± 4.4	1.93(4) : 2
	700	56.6 ± 6.0	1.94(7) : 2
β-$Cu_2V_2O_7$	400	42.0 ± 7.9	1.92(6) : 2
	500	61.0 ± 3.5	1.95(3) : 2

[a] The average atomic % ratio from different spots was taken.