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Multiferroic properties in the spin-frustrated $Cu_2Te_2O_5X_2$ (X = Cl and Br) YU-KUAN YANG, CHIN-CHIA YEH, YI-BIN JIN, SUDIP MUKHERJEE, Department of Physics, National Sun Yat-Sen University, Kaohsiung 804, Taiwan, HELMUTH BERGER, Institutes of Physics of Complex Matter, EPFL 1015, Lausanne, Swizerland, HUNG-DUEN YANG, Department of Physics, National Sun Yat-Sen University, Kaohsiung 804, Taiwan — The geometrically frustrated spin-tetrahedral systems $Cu_2Te_2O_5X_2$ (X = Cl and Br) have been studied using magnetization, dielectric constant and temperature-dependent x-ray diffraction. It was found that a antiferromagnetic ordering and a step-jump in polarization are observed at T=18.5 K for X=Cl and T=11.5 K for X=Br, respectively. The multiferroic properties for $Cu_2Te_2O_5X_2$(X = Cl and Br) are discussed.

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