

## Inelastic Neutron Scattering Study of Mg and Al Doped Two-Dimensional Triangular-Lattice Antiferromagnet $\text{CuCrO}_2$

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$\text{CuCrO}_2$  has triangular-lattice layers of magnetic  $\text{Cr}^{3+}$  ions separated from each other by non-magnetic layers of  $\text{Cu}^+$  ions, which makes this compound a quasi two-dimensional (2D) triangular-lattice antiferromagnet with  $S = 3/2$ . Recently, it was found that small amount of element substitution strongly affects magnetic and transport properties.<sup>1</sup>

In the present study, we have studied magnetic excitations in Mg and Al doped  $\text{CuCrO}_2$  by inelastic neutron scattering using the chopper spectrometer AMATERAS at J-PARC. We will discuss the substitution effect on the spin dynamics in comparison with non-doped compound as well as Ag doped compound.<sup>2</sup>

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<sup>1</sup>T. Okuda *et al.*, Phys. Rev. B **72**, 144403 (2005); Phys. Rev. B **77**, 134423 (2008); J. Phys. Soc. Jpn. **78**, 013604 (2009); J. Phys. Soc. Jpn. **80**, 014711 (2011).

<sup>2</sup>R. Kajimoto *et al.*, J. Phys. Soc. Jpn. **79**, 123705 (2010).