Spin dynamics in the S=1/2 antiferromagnetic chain compounds delta-(EDT-TTF-CONMe2)(2)X (X=AsF6, Br): A multifrequency electron spin resonance study

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Résumé en anglais	We present a multifrequency electron spin resonance study in the range of 4–420 GHz of the quasi-one-dimensional, nondimerized, quarter-filled Mott insulators, δ-(EDT-TTF-CONMe2)2X (X=AsF6,Br). In the high-temperature orthorhombic phase above T~190 K, the magnitude and the temperature dependence of the high-temperature spin susceptibility are described by a S=1/2 Heisenberg antiferromagnetic chain with JAsF6=298 K and JBr=474 K coupling constants for X=AsF6 and Br, respectively. We estimate from the temperature dependence of the linewidth (ΔH) an exchange anisotropy, J′/J of ~2×10−3. The frequency dependence of ΔH and the g shift have an unusual quadratic dependence in all crystallographic orientations that we attribute to an antisymmetric exchange (Dzyaloshinskii-Moriya) interaction.
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