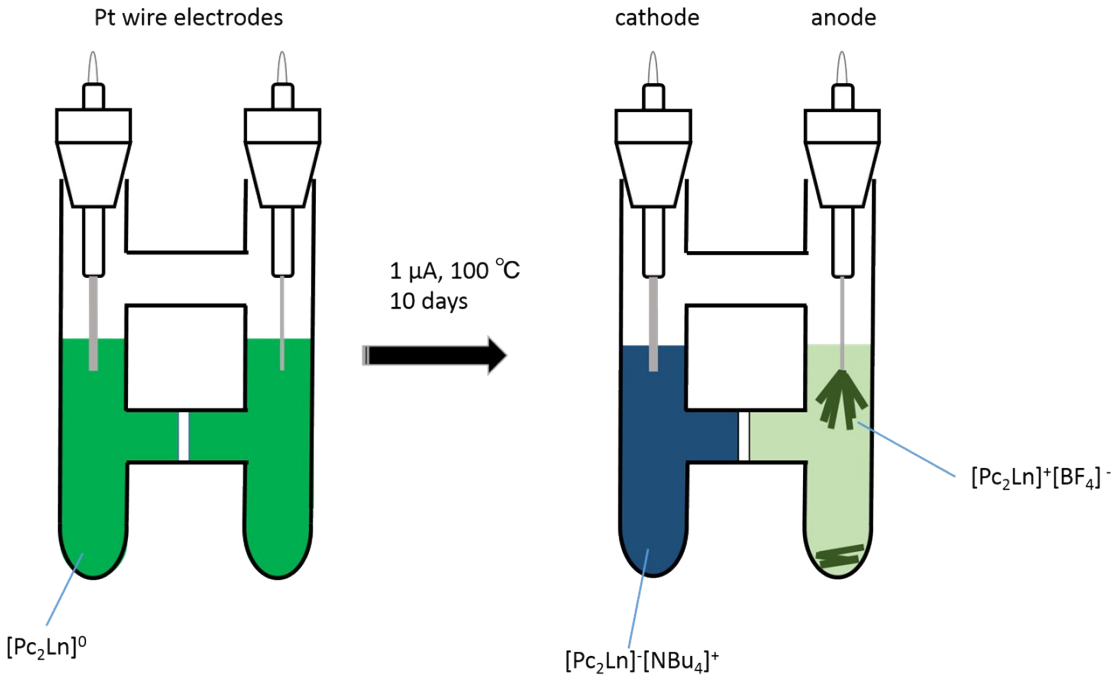
Supporting Information

Observation of magnetic interactions between localized 4f- and itinerant π-electrons in a single crystal of cationic bisphthalocyanine complexes containing diluted spin centres

Takamitsu Fukuda,[a] Shun Onodera,[a] Hirohito Watanabe,[b] Kenji Shirasaki,[b] Akira Fuyuhiro,[a] Tomoo Yamamura[b] and Naoto Ishikawa[a*]*

a) Department of Chemistry, Graduate School of Science, Osaka University, Toyonaka, 560-0043, Japan

b) Laboratory of Alpha-Ray Emitters, Institute for Material Research, Tohoku University, Sendai 980-8577, Japan



Scheme S1 Equipment used for crystal growing.

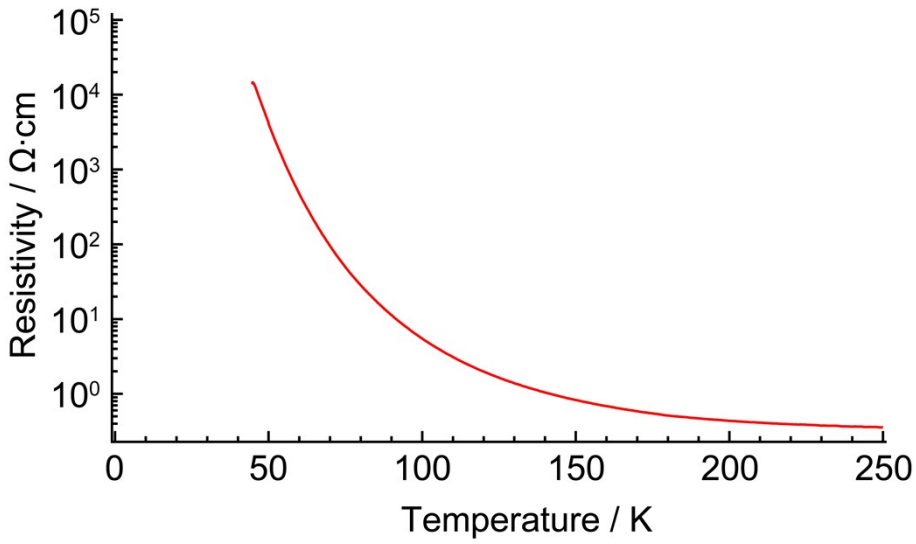


Figure S1 Temperature dependence of the electric resistivity along the *c* axis of $[Pc_2Y_{0.9}Tb_{0.1}][BF_4]$.

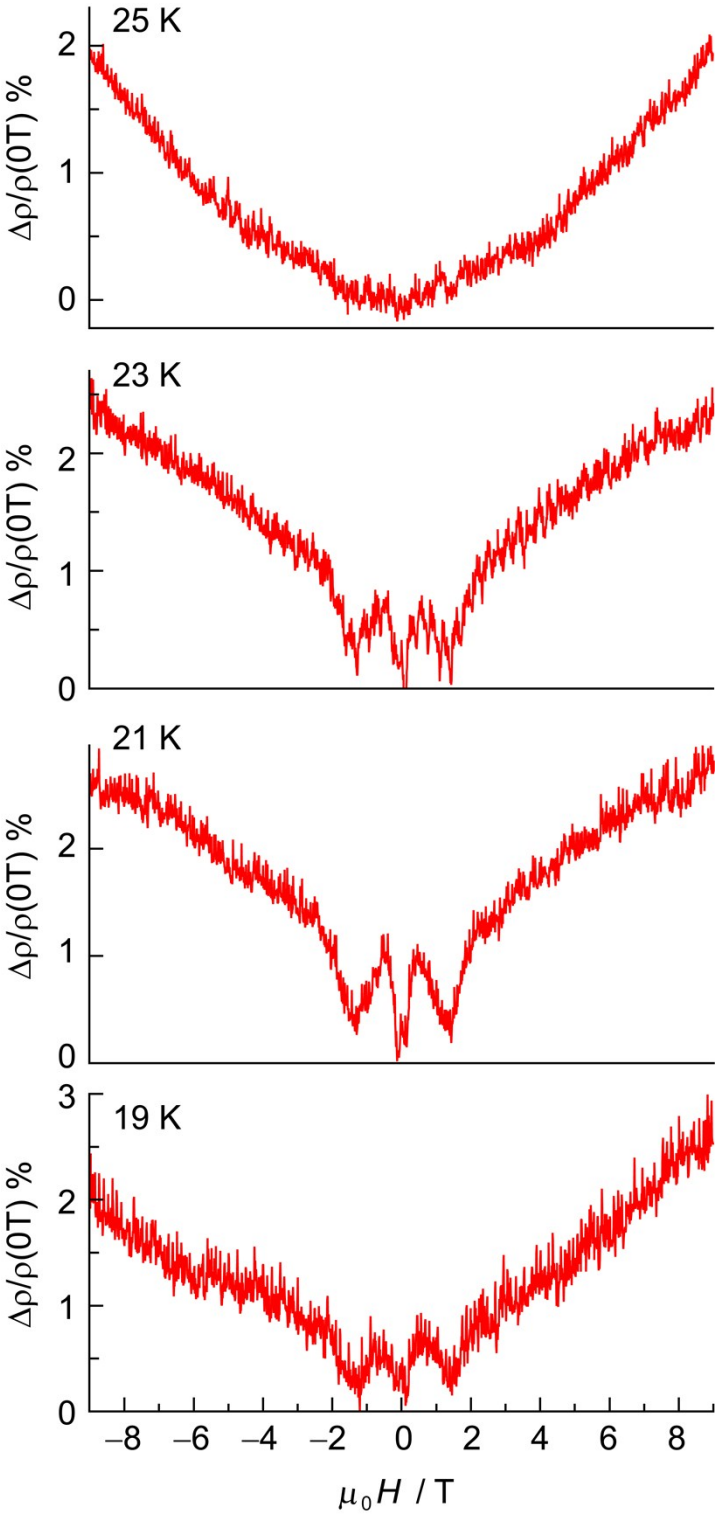


Figure S2 Magnetic field dependence of variation of electric resistivity (ρ) of $[Pc_2Y_{0.95}Tb_{0.05}][BF_4]$ at 25, 23, 21 and 19 K (from top to bottom). The magnetic field was applied along the *c* axis.

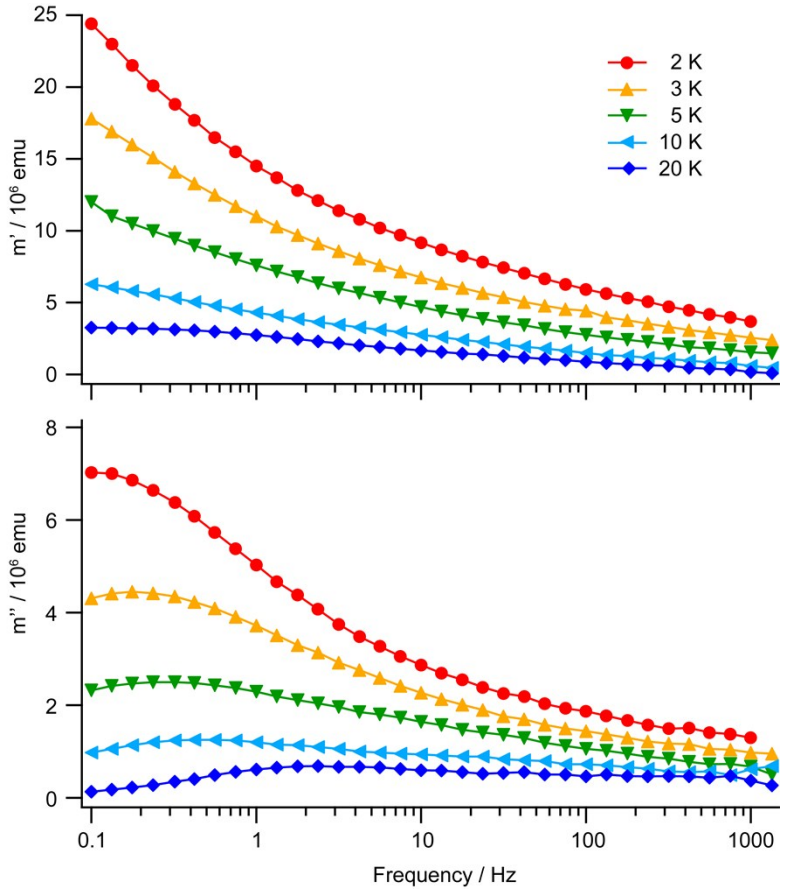


Figure S3 Plots of ac susceptibilities of powdered $[Pc_2Y_{0.98}Tb_{0.02}][BF_4]$ against applied magnetic field frequencies at zero external static magnetic field.