

An Organic-Inorganic Hybrid Exhibiting Electrical Conduction and Single-Ion-Magnetism

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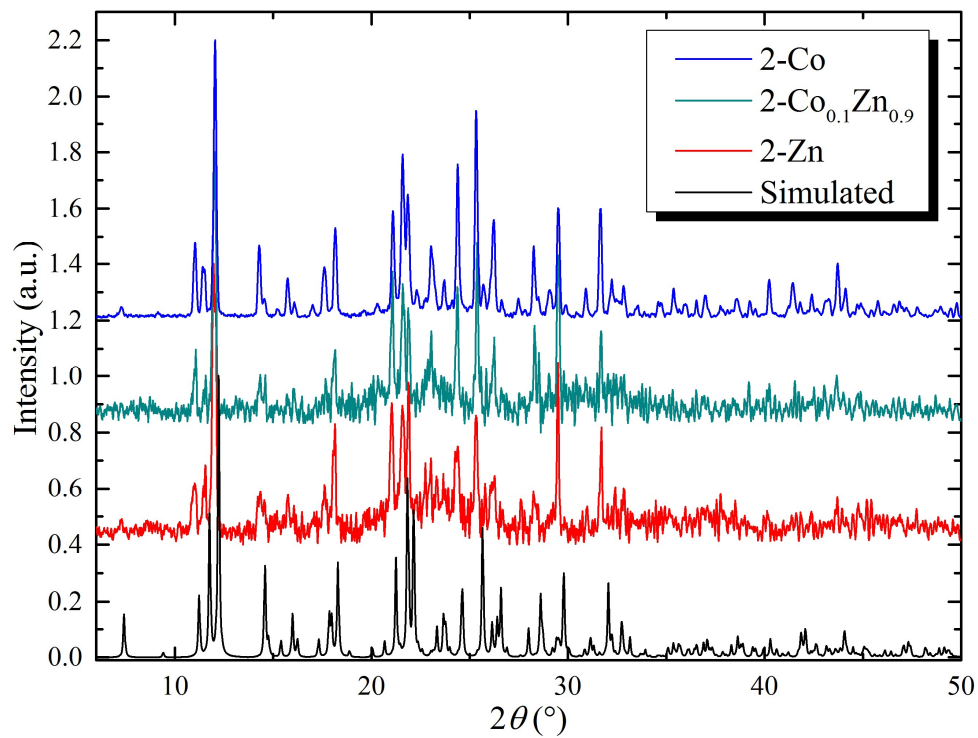


Figure S1. Experimental powder X-ray spectra of **2-Co**, **2-Co_{0.1}Zn_{0.9}**, **2-Zn** and simulated spectrum of **2-Co**.

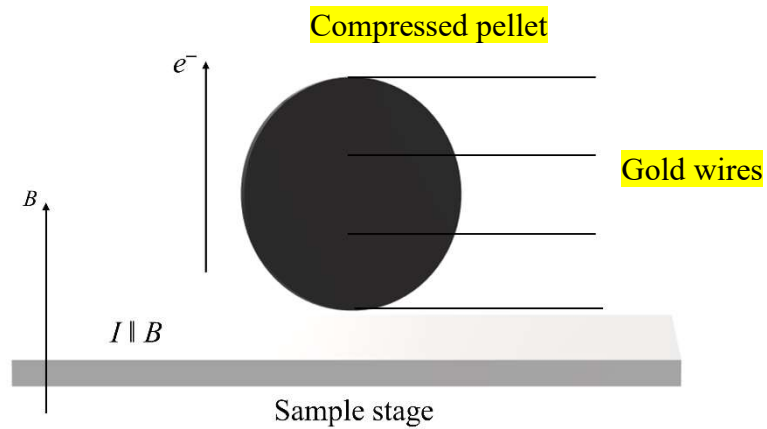


Figure S2. Measuring current and magnetic field direction geometry for the magnetoresistance measurement.

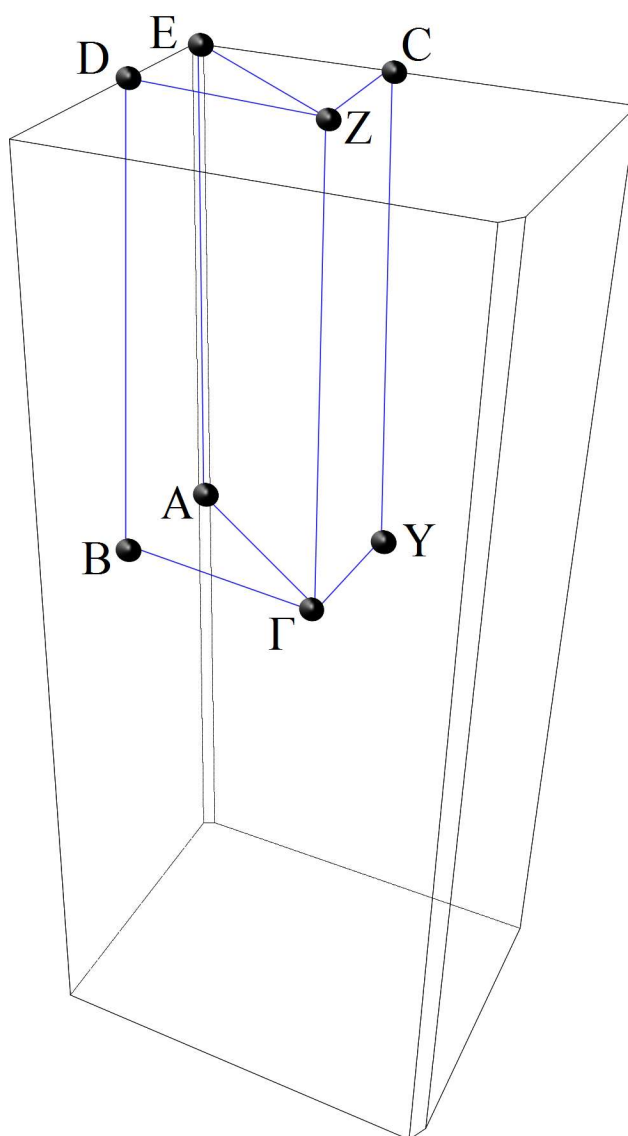


Figure S3. Brillouin zone of **2-Co** with the high symmetry point used for band structure calculations.

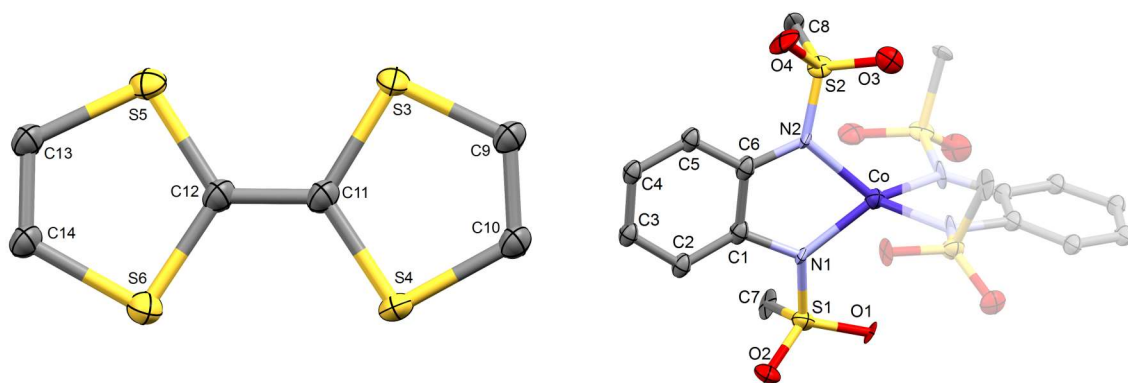


Figure S4. Asymmetric unit and atoms names of **2-Co**.

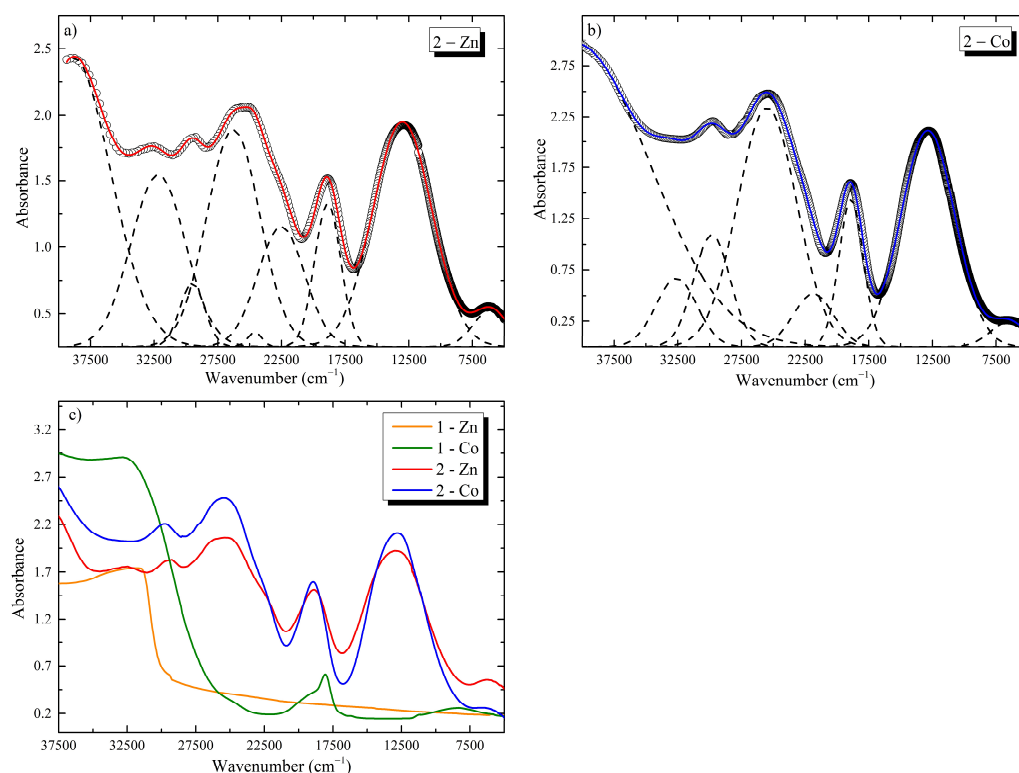


Figure S5. Deconvolution of solid-state UV-Visible spectrum of a) **2-Zn** and b) **2-Co**. The open circle are experimental data, and the solid line was fitted by summing Gaussian curves. c) Comparison of UV-Visible spectra between **1-Zn**, **1-Co**, **2-Zn** and **2-Co**.

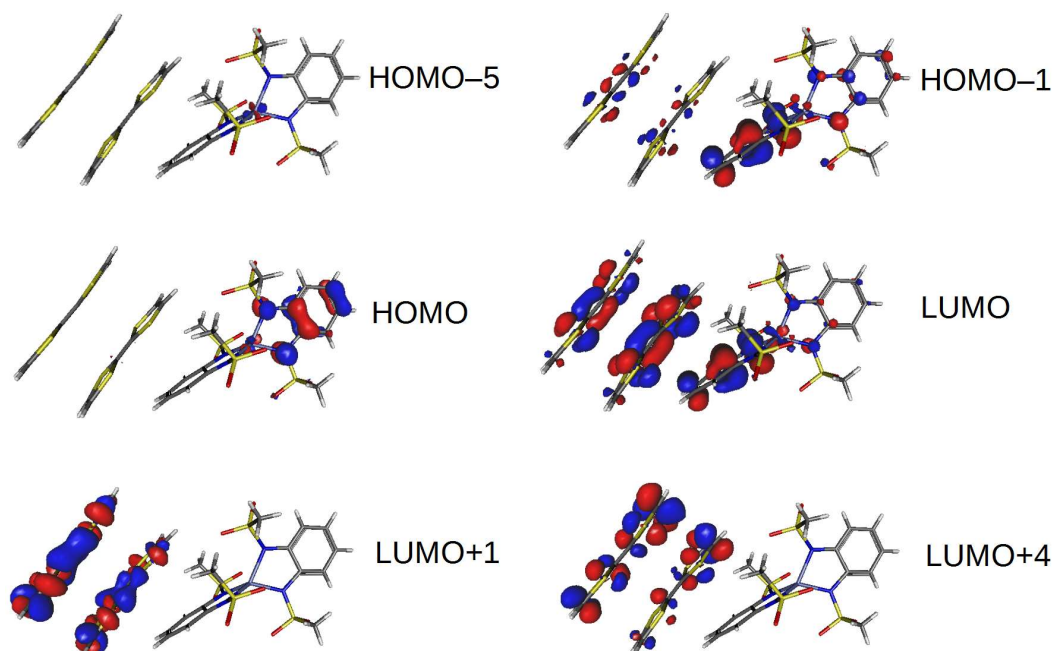


Figure S6. Representation of the main orbitals involved in the lowest energy transition.

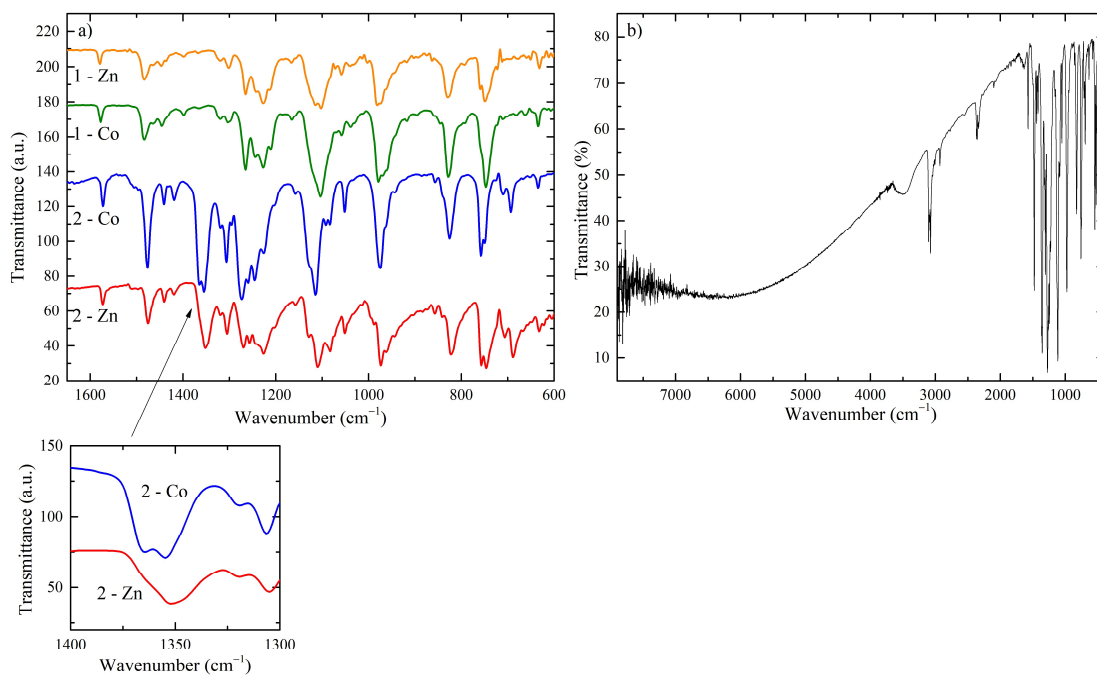


Figure S7. a) Comparison of the IR spectra between **1-Co**, **1-Zn**, **2-Co** and **2-Zn**; the transmittance of **2-Co** and **2-Zn** in the range of 1300-1400 cm^{-1} . b) full range IR spectrum of **2-Co**.

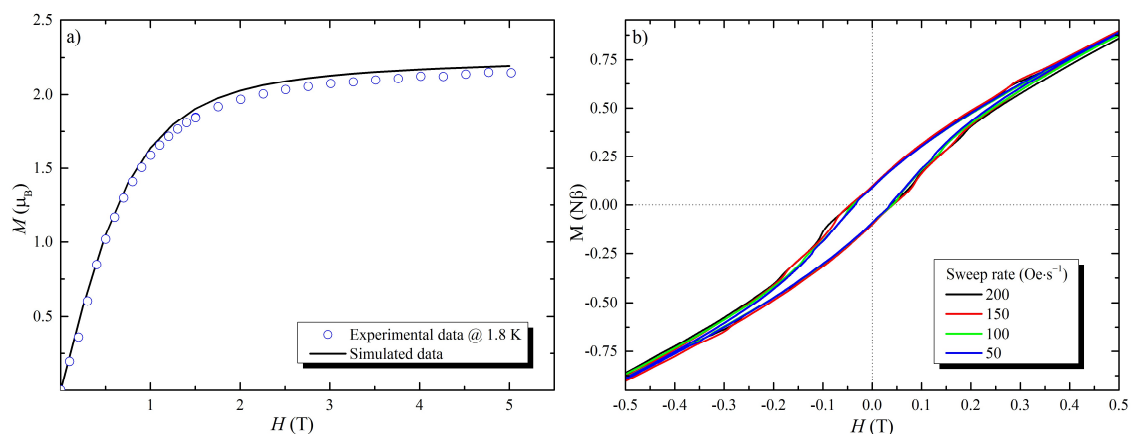


Figure S8. a) Static magnetisation of **2-Co** at 1.8 K and its simulation (see main text for parameters); b) magnetic hysteresis of **2-Co** at a 2.5 K at various sweep rates.

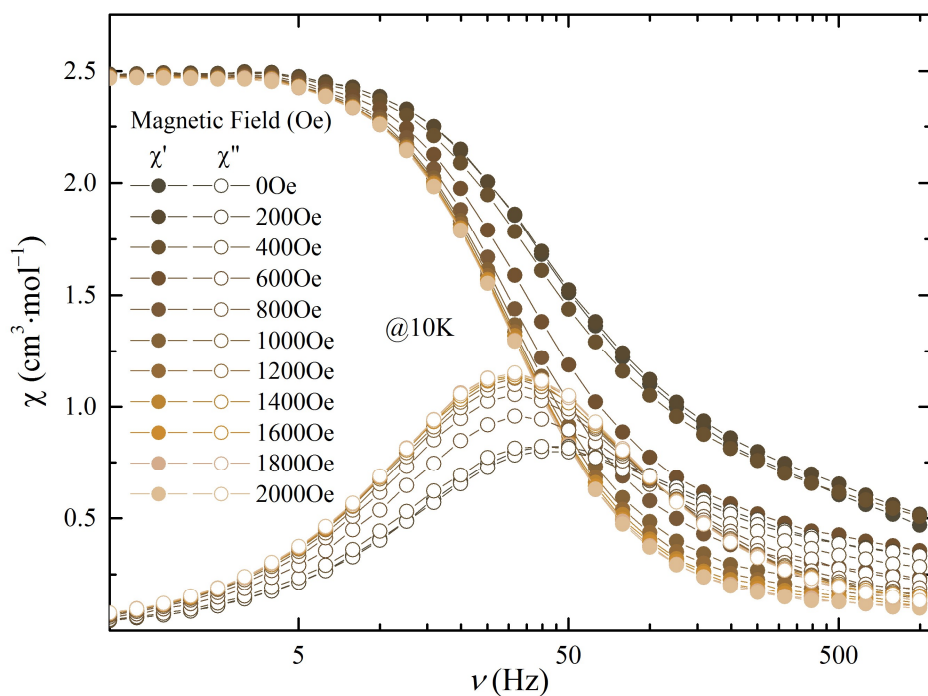


Figure S9. In-phase and out-of-phase signals of magnetic susceptibility of **2-Co** as a function of the oscillating field frequency and static magnetic field intensity.

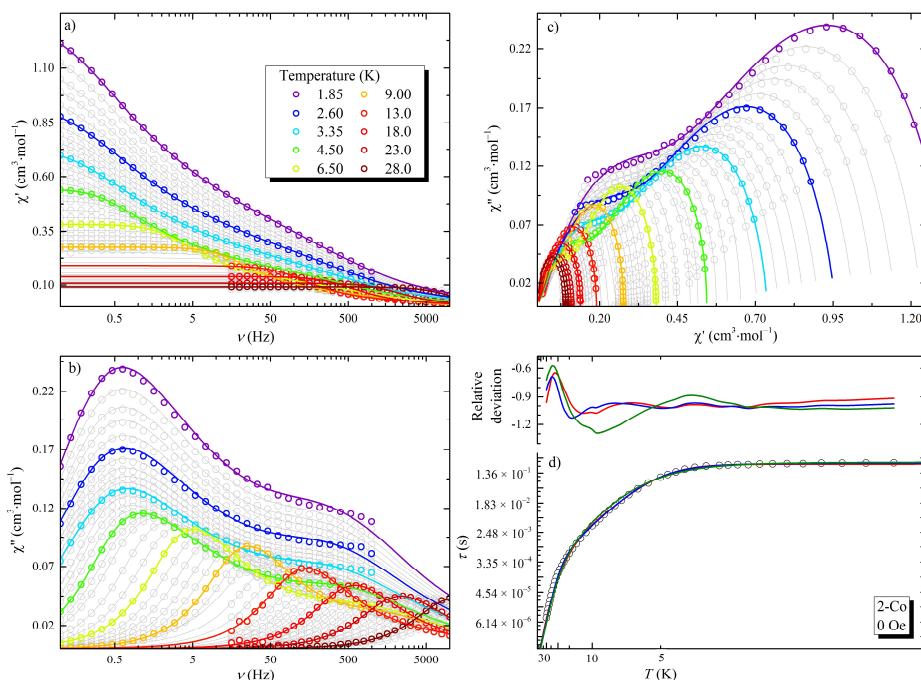


Figure S10. a) In-phase, b) out-of-phase and c) Argand plots and d) comparison of the various model possible for the fitting of the relaxation time for **2-Co** as a function of the temperature without an applied magnetic field. The line was fitted.

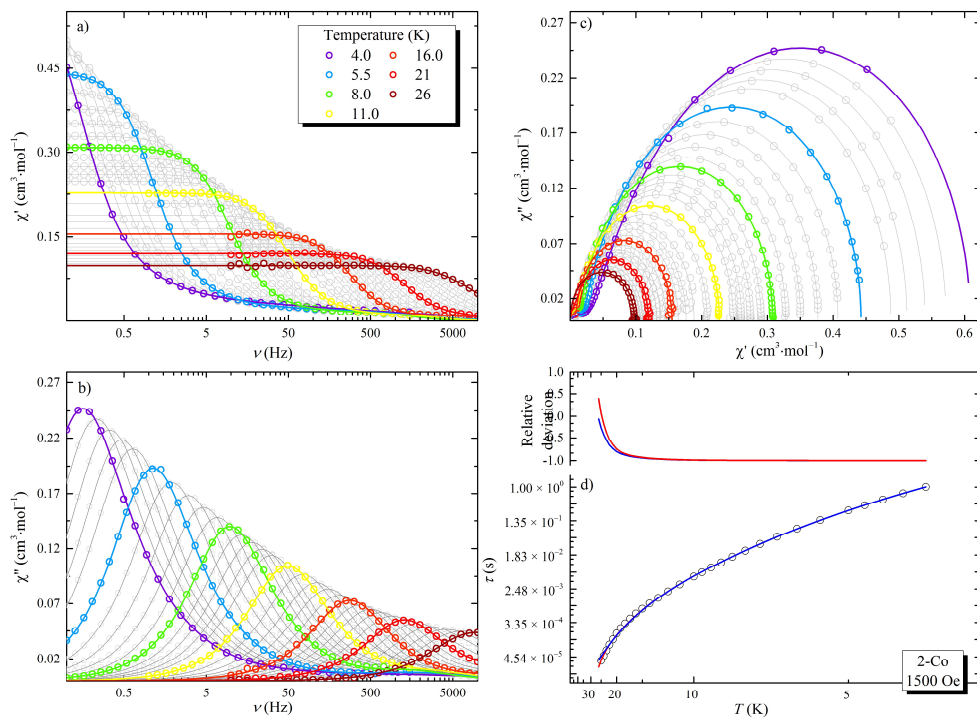


Figure S11. a) In-phase, b) out-of-phase and c) Argand plots and d) comparison of the various models possible for the fitting of the relaxation time for **2-Co** as a function of the temperature in a 1500 Oe magnetic field. The line was fitted.

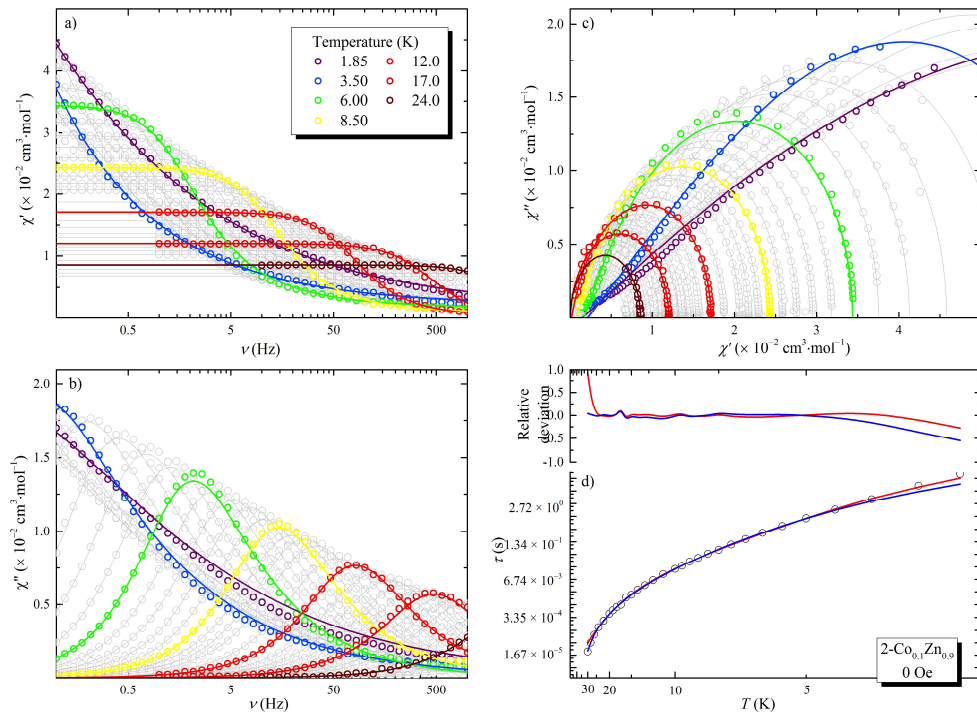


Figure S12. a) In-phase, b) out-of-phase and c) Argand plots and d) comparison of the various models possible for the fitting of the relaxation time for **2-Co_{0.1}Zn_{0.9}** as a function of the temperature without magnetic field. The line was fitted.

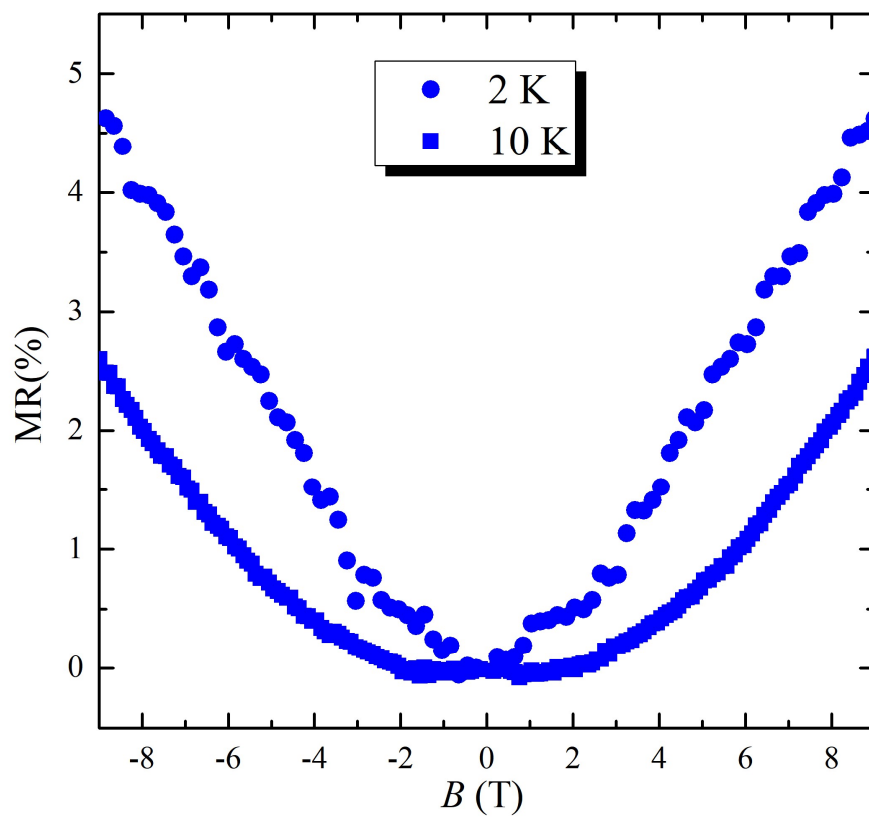


Figure S13. The magnetic field dependence of magnetoresistance of **2-Co** at 2K and 10 K.

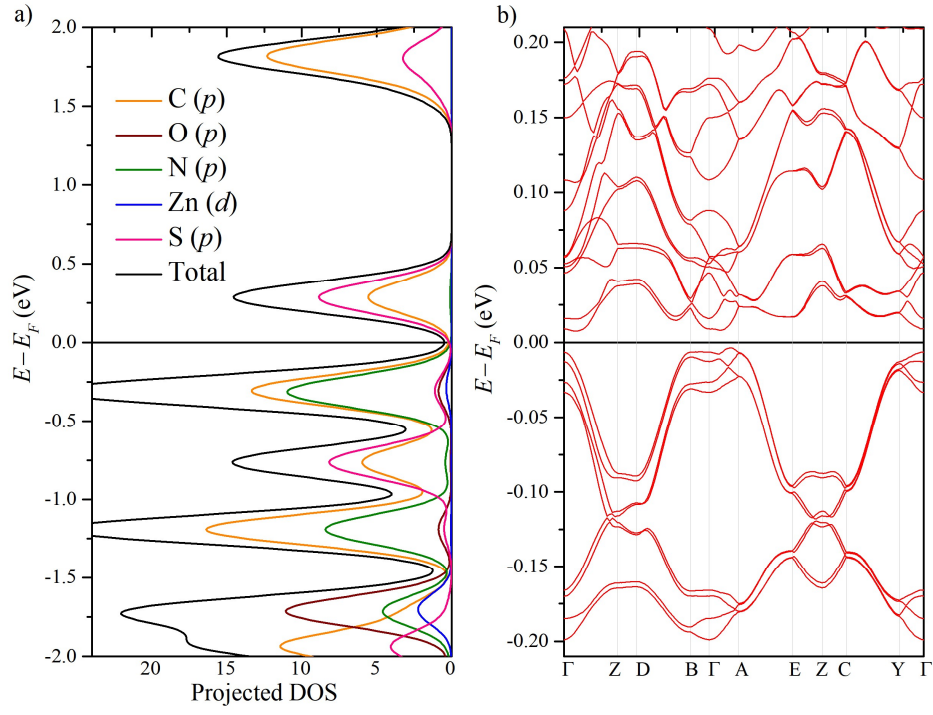


Figure S14. a) Projected DOS and b) band structure of **2-Zn**. High symmetry points in the crystal reciprocal lattice: $\Gamma = (0, 0, 0)$ $Z = (0, 0.5, 0)$ $D = (0, 0.5, 0.5)$ $B = (0, 0, 0.5)$ $A = (-0.5, 0, 0.5)$ $E = (-0.5, 0.5, 0.5)$ $C = (-0.5, 0.5, 0)$ $Y = (-0.5, 0, 0)$.

Table S1. Summary of the crystal data refine.

	2-Co	2-Zn
Empirical formula	C ₂₈ H ₂₈ CoN ₄ O ₈ S ₁₂	C ₂₈ H ₂₈ N ₄ O ₈ S ₁₂ Zn
Formula weight	992.26	998.71
Crystal system	Monoclinic	Monoclinic
Space group	<i>C2/c</i>	<i>C2/c</i>
<i>a</i> (Å)	23.8351(4)	23.7782(6)
<i>b</i> (Å)	8.36310(10)	8.3514(2)
<i>c</i> (Å)	18.7468(4)	18.7652(5)
α (°)	90	90
β (°)	92.320(2)	92.829(2)
γ (°)	90	90
<i>V</i> (Å ³)	3733.84(11)	3721.88(16)
<i>Z</i>	4	4
λ (Å)	0.68890	0.68890
<i>T</i> (K)	100	100
2θ range (°)	2.7570–33.6240	2.011–33.652
Index ranges	$-36 \leq h \leq 35$	$-37 \leq h \leq 37$
	$-12 \leq k \leq 12$	$-13 \leq k \leq 13$
	$-28 \leq l \leq 27$	$-28 \leq l \leq 28$
No. measured reflections	6748	7353
No. refined parameters	240	240
Goodness-of-fit on <i>F</i> ² , <i>S</i>	1.257	0.811
<i>R</i> 1; <i>wR</i> 2 (%)	5.34; 14.19	4.30; 7.04

Table S2. Summary of the short contacts and hydrogen bonds in Å (VdW = sum of the van der Waals radius).

Short contacts				Hydrogen bonds			
Atom1	Atom2	Length	Length– VdW	Atom1	Atom2	Length	Length– VdW
S3	S6	3.417	–0.183	O2	S3	2.593	–0.367
S4	S5	3.271	–0.329	O4	S4	2.806	–0.514
S3	O2	2.953	–0.367				
S4	O4	2.806	–0.514				
S5	C4	3.465	–0.035				
S5	C5	3.230	–0.270				
O1	C13	2.947	–0.273				
O1	C14	2.965	–0.255				
O2	C9	2.887	–0.333				
O3	C9	3.199	–0.021				
O4	C10	3.025	–0.193				
C4	C12	3.327	–0.073				
C7	C10	3.357	–0.043				
C11	C12	3.323	–0.077				

Table S3. Summary of the magnetic data for **1-Co** (from Ref 24) and **2-Co**.

	1-Co	2-Co
χT	3.14 cm ³ ·K·mol ^{–1}	3.16 cm ³ ·K·mol ^{–1}
M at 1.8 K	2.56μ _B (at 7 T)	2.14μ _B (at 5 T)
D	–115 cm ^{–1}	–112.39 cm ^{–1}
$g_{\perp}$	2.20	2.28
$g_{\parallel}$	3.03	2.93

Table S4. Summary of the equation used for fitting the relaxation times of **2-Co**.

Two relaxation time Havriliak-Negami model		$\chi = \chi_{adia} + \frac{\chi_{iso1}}{(1 + (i\omega\tau_1)^{1-\alpha_1})^{\beta_1}} + \frac{\chi_{iso2}}{(1 + (i\omega\tau_2)^{1-\alpha_2})^{\beta_2}}$
0 Oe	Model 1 & Model 2	$\tau^{-1} = CT^m + \tau_{0_1}^{-1} \exp\left(\frac{-\Delta_1}{k_B T}\right) + QTM$
	Model 3	$\tau^{-1} = CT^m + \tau_{0_1}^{-1} \exp\left(\frac{-\Delta_1}{k_B T}\right) + \tau_{0_2}^{-1} \exp\left(\frac{-\Delta_2}{k_B T}\right) + QTM$
1500 Oe	Model 4	$\tau^{-1} = CT^m + \tau_{0_1}^{-1} \exp\left(\frac{-\Delta_1}{k_B T}\right)$
	Model 5	$\tau^{-1} = CT^m + \tau_{0_1}^{-1} \exp\left(\frac{-\Delta_1}{k_B T}\right) + \tau_{0_2}^{-1} \exp\left(\frac{-\Delta_2}{k_B T}\right)$

Table S5. Summary of the relaxation time fitting parameters of **2-Co** according to the model described in **Table S4**.

		Raman		First Orbach		Second Orbach		QTM	Adj. R-Square
		C	m	Δ_1	τ_{0_1}	Δ_2	τ_{0_2}		
		s ⁻¹ K ^{-m}		cm ⁻¹	s	cm ⁻¹	s		
2-Co @ 0 Oe	Model 1	2.35×10^{-5}	6.59	24.1	2.08×10^{-4}			2.44×10^{-1}	0.99832
	Model 2	2.05×10^{-3}	5			151.9	5.72×10^{-9}	2.75×10^{-1}	0.99601
	Model 3	1.11×10^{-3}	5	28.8	1.11×10^{-4}	151.9	5.72×10^{-9}	2.62×10^{-1}	0.99961
2-Co @ 1500 Oe	Model 4	3.88×10^{-4}	5.53	27.0	3.57×10^{-4}				0.99993
	Model 5	3.98×10^{-4}	5.51	27.2	3.42×10^{-4}	365.2	1.19×10^{-13}		0.99993
2-Co _{0.1} Zn _{0.9} @ 0 Oe	Model 4	1.48×10^{-4}	5.83	27.3	2.83×10^{-4}				0.99687
	Model 5	3.82×10^{-4}	5.5	32.8	1.59×10^{-4}	294.8	1.1×10^{-11}		0.99826

Table S6. Summary of the parameters obtained for **2-Co** without an external magnetic field from the two-relaxation time Havriliak-Negami model. X_{adia} was fixed to zero, and β of the second peak was fixed to 1 to avoid overparameterisation.

T (K)	First peak									Second peak							Reduced Chi-Sqr	Adj. R-Square
	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	β	β	α	α	τ (s)	τ (s)	$\tau_{\text{corrected}}$ (s)	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	α	α	τ (s)	τ (s)	$\tau_{\text{corrected}}$ (s)		
	Value	Standard error	Value	Standard error	Value	Standard error	Value	Standard error		Value	Standard error	Value	Standard error	Value	Standard error			
1.85	1.07 × 10 ⁰	5.37 × 10 ⁻²	3.75 × 10 ⁻¹	5.25 × 10 ⁻²	2.24 × 10 ⁻¹	2.85 × 10 ⁻²	8.12 × 10 ⁻¹	9.11 × 10 ⁻²	2.66 × 10 ⁻¹	2.58 × 10 ⁻¹	5.95 × 10 ⁻²	3.98 × 10 ⁻¹	5.89 × 10 ⁻²	3.94 × 10 ⁻⁴	1.80 × 10 ⁻⁵	3.94 × 10 ⁻⁴	8.19 × 10 ⁻⁶	0.99992
2.00	9.96 × 10 ⁻¹	5.22 × 10 ⁻²	3.74 × 10 ⁻¹	5.46 × 10 ⁻²	2.25 × 10 ⁻¹	2.96 × 10 ⁻²	8.05 × 10 ⁻¹	9.43 × 10 ⁻²	2.63 × 10 ⁻¹	2.38 × 10 ⁻¹	5.76 × 10 ⁻²	3.94 × 10 ⁻¹	6.24 × 10 ⁻²	3.93 × 10 ⁻⁴	1.82 × 10 ⁻⁵	3.93 × 10 ⁻⁴	7.90 × 10 ⁻⁶	0.99991
2.15	9.24 × 10 ⁻¹	4.87 × 10 ⁻²	3.77 × 10 ⁻¹	5.54 × 10 ⁻²	2.28 × 10 ⁻¹	2.94 × 10 ⁻²	7.89 × 10 ⁻¹	9.39 × 10 ⁻²	2.59 × 10 ⁻¹	2.26 × 10 ⁻¹	5.39 × 10 ⁻²	3.98 × 10 ⁻¹	6.08 × 10 ⁻²	3.88 × 10 ⁻⁴	1.80 × 10 ⁻⁵	3.88 × 10 ⁻⁴	6.57 × 10 ⁻⁶	0.99991
2.30	8.72 × 10 ⁻¹	4.59 × 10 ⁻²	3.63 × 10 ⁻¹	4.98 × 10 ⁻²	2.13 × 10 ⁻¹	2.74 × 10 ⁻²	8.07 × 10 ⁻¹	8.57 × 10 ⁻²	2.60 × 10 ⁻¹	2.10 × 10 ⁻¹	5.02 × 10 ⁻²	4.01 × 10 ⁻¹	6.10 × 10 ⁻²	4.05 × 10 ⁻⁴	1.83 × 10 ⁻⁵	4.05 × 10 ⁻⁴	5.50 × 10 ⁻⁶	0.99992
2.45	8.16 × 10 ⁻¹	4.91 × 10 ⁻²	3.74 × 10 ⁻¹	6.06 × 10 ⁻²	2.27 × 10 ⁻¹	3.16 × 10 ⁻²	7.74 × 10 ⁻¹	1.01 × 10 ⁻¹	2.52 × 10 ⁻¹	2.01 × 10 ⁻¹	5.39 × 10 ⁻²	4.02 × 10 ⁻¹	6.78 × 10 ⁻²	3.91 × 10 ⁻⁴	2.03 × 10 ⁻⁵	3.91 × 10 ⁻⁴	6.08 × 10 ⁻⁶	0.99990
2.60	7.68 × 10 ⁻¹	4.71 × 10 ⁻²	3.70 × 10 ⁻¹	6.15 × 10 ⁻²	2.21 × 10 ⁻¹	3.31 × 10 ⁻²	7.70 × 10 ⁻¹	1.02 × 10 ⁻¹	2.50 × 10 ⁻¹	1.89 × 10 ⁻¹	5.16 × 10 ⁻²	3.91 × 10 ⁻¹	7.11 × 10 ⁻²	3.91 × 10 ⁻⁴	2.01 × 10 ⁻⁵	3.92 × 10 ⁻⁴	6.46 × 10 ⁻⁶	0.99988
2.75	7.18 × 10 ⁻¹	4.50 × 10 ⁻²	3.68 × 10 ⁻¹	6.15 × 10 ⁻²	2.10 × 10 ⁻¹	3.34 × 10 ⁻²	7.57 × 10 ⁻¹	9.90 × 10 ⁻²	2.49 × 10 ⁻¹	1.85 × 10 ⁻¹	4.93 × 10 ⁻²	3.97 × 10 ⁻¹	6.85 × 10 ⁻²	3.94 × 10 ⁻⁴	2.09 × 10 ⁻⁵	3.94 × 10 ⁻⁴	5.79 × 10 ⁻⁶	0.99988
2.90	6.84 × 10 ⁻¹	3.89 × 10 ⁻²	3.60 × 10 ⁻¹	5.27 × 10 ⁻²	2.02 × 10 ⁻¹	2.91 × 10 ⁻²	7.50 × 10 ⁻¹	8.42 × 10 ⁻²	2.44 × 10 ⁻¹	1.72 × 10 ⁻¹	4.23 × 10 ⁻²	3.99 × 10 ⁻¹	6.33 × 10 ⁻²	3.88 × 10 ⁻⁴	1.85 × 10 ⁻⁵	3.88 × 10 ⁻⁴	4.14 × 10 ⁻⁶	0.99991
3.05	6.50 × 10 ⁻¹	4.13 × 10 ⁻²	3.74 × 10 ⁻¹	6.44 × 10 ⁻²	2.14 × 10 ⁻¹	3.40 × 10 ⁻²	7.02 × 10 ⁻¹	9.69 × 10 ⁻²	2.34 × 10 ⁻¹	1.67 × 10 ⁻¹	4.52 × 10 ⁻²	3.92 × 10 ⁻¹	6.98 × 10 ⁻²	3.72 × 10 ⁻⁴	2.03 × 10 ⁻⁵	3.72 × 10 ⁻⁴	5.15 × 10 ⁻⁶	0.99987
3.20	6.18 × 10 ⁻¹	3.40 × 10 ⁻²	3.46 × 10 ⁻¹	4.68 × 10 ⁻²	1.75 × 10 ⁻¹	2.72 × 10 ⁻²	7.20 × 10 ⁻¹	7.12 × 10 ⁻²	2.36 × 10 ⁻¹	1.56 × 10 ⁻¹	3.67 × 10 ⁻²	3.97 × 10 ⁻¹	6.12 × 10 ⁻²	3.86 × 10 ⁻⁴	1.78 × 10 ⁻⁵	3.86 × 10 ⁻⁴	3.39 × 10 ⁻⁶	0.99991
3.35	5.93 × 10 ⁻¹	2.98 × 10 ⁻²	3.34 × 10 ⁻¹	4.09 × 10 ⁻²	1.56 × 10 ⁻¹	2.52 × 10 ⁻²	7.05 × 10 ⁻¹	6.10 × 10 ⁻²	2.30 × 10 ⁻¹	1.45 × 10 ⁻¹	3.21 × 10 ⁻²	3.88 × 10 ⁻¹	5.91 × 10 ⁻²	3.77 × 10 ⁻⁴	1.60 × 10 ⁻⁵	3.77 × 10 ⁻⁴	2.99 × 10 ⁻⁶	0.99991
3.50	5.68 × 10 ⁻¹	2.71 × 10 ⁻²	3.29 × 10 ⁻¹	3.76 × 10 ⁻²	1.39 × 10 ⁻¹	2.38 × 10 ⁻²	6.72 × 10 ⁻¹	5.34 × 10 ⁻²	2.22 × 10 ⁻¹	1.38 × 10 ⁻¹	2.90 × 10 ⁻²	3.84 × 10 ⁻¹	5.67 × 10 ⁻²	3.68 × 10 ⁻⁴	1.50 × 10 ⁻⁵	3.68 × 10 ⁻⁴	2.70 × 10 ⁻⁶	0.99992
3.75	5.15 × 10 ⁻¹	7.47 × 10 ⁻²	2.97 × 10 ⁻¹	9.04 × 10 ⁻²	2.97 × 10 ⁻²	6.59 × 10 ⁻²	5.97 × 10 ⁻¹	1.08 × 10 ⁻¹	2.15 × 10 ⁻¹	1.39 × 10 ⁻¹	7.91 × 10 ⁻²	4.07 × 10 ⁻¹	1.49 × 10 ⁻¹	3.73 × 10 ⁻⁴	6.26 × 10 ⁻⁵	3.73 × 10 ⁻⁴	2.63 × 10 ⁻⁶	0.99911
4.00	5.17 × 10 ⁻¹	1.45 × 10 ⁻²	2.58 × 10 ⁻¹	1.05 × 10 ⁻²	0	fixed	5.91 × 10 ⁻¹	1.59 × 10 ⁻²	1.97 × 10 ⁻¹	9.29 × 10 ⁻²	1.41 × 10 ⁻²	3.05 × 10 ⁻¹	5.33 × 10 ⁻²	3.64 × 10 ⁻⁴	1.58 × 10 ⁻⁵	3.64 × 10 ⁻⁴	3.01 × 10 ⁻⁶	0.99989
4.25	4.80 × 10 ⁻¹	9.67 × 10 ⁻³	2.73 × 10 ⁻¹	8.12 × 10 ⁻³	0	fixed	4.98 × 10 ⁻¹	9.91 × 10 ⁻³	1.75 × 10 ⁻¹	9.44 × 10 ⁻²	9.48 × 10 ⁻³	3.23 × 10 ⁻¹	3.44 × 10 ⁻²	3.12 × 10 ⁻⁴	8.59 × 10 ⁻⁶	3.12 × 10 ⁻⁴	1.46 × 10 ⁻⁶	0.99994
4.50	4.46 × 10 ⁻¹	6.17 × 10 ⁻³	2.94 × 10 ⁻¹	6.13 × 10 ⁻³	0	fixed	3.89 × 10 ⁻¹	5.50 × 10 ⁻³	1.45 × 10 ⁻¹	9.83 × 10 ⁻²	6.06 × 10 ⁻³	3.35 × 10 ⁻¹	2.14 × 10 ⁻²	2.71 × 10 ⁻⁴	6.05 × 10 ⁻⁶	2.71 × 10 ⁻⁴	7.36 × 10 ⁻⁷	0.99997
4.75	4.11 × 10 ⁻¹	4.76 × 10 ⁻³	3.20 × 10 ⁻¹	5.59 × 10 ⁻³	0	fixed	3.06 × 10 ⁻¹	3.64 × 10 ⁻³	1.22 × 10 ⁻¹	1.05 × 10 ⁻¹	4.70 × 10 ⁻³	3.57 × 10 ⁻¹	1.56 × 10 ⁻²	2.45 × 10 ⁻⁴	6.09 × 10 ⁻⁶	2.45 × 10 ⁻⁴	5.11 × 10 ⁻⁷	0.99998
5.0	3.81 × 10 ⁻¹	4.23 × 10 ⁻³	3.50 × 10 ⁻¹	5.85 × 10 ⁻³	0	fixed	2.35 × 10 ⁻¹	2.68 × 10 ⁻³	1.02 × 10 ⁻¹	1.10 × 10 ⁻¹	4.20 × 10 ⁻³	3.76 × 10 ⁻¹	1.34 × 10 ⁻²	2.30 × 10 ⁻⁴	6.93 × 10 ⁻⁶	2.30 × 10 ⁻⁴	4.46 × 10 ⁻⁷	0.99998
5.5	3.31 × 10 ⁻¹	3.11 × 10 ⁻³	4.12 × 10 ⁻¹	5.57 × 10 ⁻³	0	fixed	1.41 × 10 ⁻¹	1.28 × 10 ⁻³	6.94 × 10 ⁻²	1.17 × 10 ⁻¹	3.14 × 10 ⁻³	4.17 × 10 ⁻¹	9.19 × 10 ⁻³	2.15 × 10 ⁻⁴	7.47 × 10 ⁻⁶	2.15 × 10 ⁻⁴	2.20 × 10 ⁻⁷	0.99999
6.0	3.03 × 10 ⁻¹	1.88 × 10 ⁻³	4.58 × 10 ⁻¹	4.21 × 10 ⁻³	0	fixed	8.71 × 10 ⁻²	5.49 × 10 ⁻⁴	4.68 × 10 ⁻²	1.09 × 10 ⁻¹	1.89 × 10 ⁻³	3.88 × 10 ⁻¹	6.74 × 10 ⁻³	1.87 × 10 ⁻⁴	4.36 × 10 ⁻⁶	1.87 × 10 ⁻⁴	1.03 × 10 ⁻⁷	0.99999
6.5	2.78 × 10 ⁻¹	2.12 × 10 ⁻³	5.01 × 10 ⁻¹	4.40 × 10 ⁻³	0	fixed	5.51 × 10 ⁻²	4.05 × 10 ⁻⁴	3.19 × 10 ⁻²	1.03 × 10 ⁻¹	2.15 × 10 ⁻³	3.99 × 10 ⁻¹	8.12 × 10 ⁻³	1.65 × 10 ⁻⁴	5.34 × 10 ⁻⁶	1.65 × 10 ⁻⁴	1.06 × 10 ⁻⁷	0.99999
7.0	2.66 × 10 ⁻¹	2.04 × 10 ⁻³	5.18 × 10 ⁻¹	6.01 × 10 ⁻³	0	fixed	3.69 × 10 ⁻²	2.90 × 10 ⁻⁴	2.19 × 10 ⁻²	8.84 × 10 ⁻²	2.06 × 10 ⁻³	3.36 × 10 ⁻¹	1.06 × 10 ⁻²	4.09 × 10 ⁻⁶	1.40 × 10 ⁻⁴	1.40 × 10 ⁻⁴	1.28 × 10 ⁻⁷	0.99999
7.5	2.48 × 10 ⁻¹	2.87 × 10 ⁻³	5.54 × 10 ⁻¹	9.21 × 10 ⁻³	0	fixed	2.49 × 10 ⁻²	2.74 × 10 ⁻⁴	1.56 × 10 ⁻²	8.34 × 10 ⁻²	2.90 × 10 ⁻³	3.45 × 10 ⁻¹	1.54 × 10 ⁻²	1.28 × 10 ⁻⁴	6.08 × 10 ⁻⁶	1.28 × 10 ⁻⁴	1.84 × 10 ⁻⁷	0.99999
8.0	2.39 × 10 ⁻¹	2.69 × 10 ⁻³	5.60 × 10 ⁻¹	9.29 × 10 ⁻³	0	fixed	1.78 × 10 ⁻²	1.93 × 10 ⁻⁴	1.13 × 10 ⁻²	7.14 × 10 ⁻²	2.71 × 10 ⁻³	2.96 × 10 ⁻¹	1.87 × 10 ⁻²	1.08 × 10 ⁻⁴	4.62 × 10 ⁻⁶	1.08 × 10 ⁻⁴	1.71 × 10 ⁻⁷	0.99999
8.5	2.28 × 10 ⁻¹	2.53 × 10 ⁻³	5.82 × 10 ⁻¹	9.74 × 10 ⁻³	0	fixed	1.27 × 10 ⁻²	1.37 × 10 ⁻⁴	8.29 × 10 ⁻³	6.44 × 10 ⁻²	2.53 × 10 ⁻³	2.47 × 10 ⁻¹	2.07 × 10 ⁻²	1.01 × 10 ⁻⁴	3.82 × 10 ⁻⁶	1.01 × 10 ⁻⁴	1.59 × 10 ⁻⁷	0.99999
9.0	2.21 × 10 ⁻¹	2.91 × 10 ⁻³	5.85 × 10 ⁻¹	1.14 × 10 ⁻²	0	fixed	9.51 × 10 ⁻³	1.16 × 10 ⁻⁴	6.22 × 10 ⁻³	5.54 × 10 ⁻²	2.91 × 10 ⁻³	2.25 × 10 ⁻¹	2.90 × 10 ⁻²	8.67 × 10 ⁻⁴	3.86 × 10 ⁻⁶	8.67 × 10 ⁻⁵	1.71 × 10 ⁻⁷	0.99998
9.5	2.10 × 10 ⁻¹	1.25 × 10 ⁻²	6.09 × 10 ⁻¹	5.44 × 10 ⁻²	0	fixed	7.03 × 10 ⁻³	3.84 × 10 ⁻⁴	4.75 × 10 ⁻³	5.14 × 10 ⁻²	1.25 × 10 ⁻²	1.82 × 10 ⁻¹	1.36 × 10 ⁻¹	8.54 × 10 ⁻⁴	1.53 × 10 ⁻⁵	8.54 × 10 ⁻⁵	3.02 × 10 ⁻⁷	0.99969
10	1.34 × 10 ⁻¹	1.91 × 10 ⁻²	8.43 × 10 ⁻¹	9.27 × 10 ⁻²	0	fixed	4.40 × 10 ⁻³	4.24 × 10 ⁻⁴	3.85 × 10 ⁻³	1.25 × 10 ⁻¹	2.64 × 10 ⁻²	5.49 × 10 ⁻¹	1.20 × 10 ⁻²	5.38 × 10 ⁻⁴	2.91 × 10 ⁻⁴	5.38 × 10 ⁻⁴	9.88 × 10 ⁻⁷	0.99961
11	1.48 × 10 ⁻¹	1.35 × 10 ⁻²	7.51 × 10 ⁻¹	5.93 × 10 ⁻²	0	fixed	3.07 × 10 ⁻³	1.98 × 10 ⁻⁴	2.45 × 10 ⁻³	8.31 × 10 ⁻²	1.70 × 10 ⁻²	5.43 × 10 ⁻¹	1.41 × 10 ⁻²	2.39 × 10 ⁻⁴	1.13 × 10 ⁻⁴	2.39 × 10 ⁻⁴	7.99 × 10 ⁻⁷	0.99971
12	1.52 × 10 ⁻¹	1.58 × 10 ⁻²	7.15 × 10 ⁻¹	7.04 × 10 ⁻²	0	fixed	2.10 × 10 ⁻³	1.59 × 10 ⁻⁴	1.62 × 10 ⁻³	5.50 × 10 ⁻²	1.86 × 10 ⁻²	5.19 × 10 ⁻¹	3.05 × 10 ⁻²	1.02 × 10 ⁻⁴	7.58 × 10 ⁻⁵	1.02 × 10 ⁻⁴	1.43 ×	

Table S7. Summary of the parameters obtained for **2-Co** in a 1500 Oe external magnetic field from two relaxation time Havriliak-Negami model. χ_{adia} was fixed to zero, and β of the second peak was fixed to 1 to avoid overparameterisation.

T (K)	First peak									Second peak							Reduced Chi-Sqr	Adj. R-Square
	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	β	β	α	α	τ (s)	τ (s)	$\tau_{\text{corrected}}$ (s)	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	α	α	τ (s)	τ (s)	$\tau_{\text{corrected}}$ (s)		
	Value	Standard error	Value	Standard error	Value	Standard error	Value	Standard error		Value	Standard error	Value	Standard error	Value	Standard error			
4.00	5.76 × 10 ⁻¹	2.84 × 10 ⁻³	7.32 × 10 ⁻¹	1.40 × 10 ⁻²	6.36 × 10 ⁻³	8.99 × 10 ⁻³	1.29 × 10 ⁰	1.73 × 10 ⁻²	1.01 × 10 ⁰	3.34 × 10 ⁻²	2.02 × 10 ⁻³	5.96 × 10 ⁻¹	3.55 × 10 ⁻²	2.41 × 10 ⁻⁴	6.61 × 10 ⁻⁵	2.41 × 10 ⁻⁵	7.86 × 10 ⁻⁷	0.99992
4.25	5.43 × 10 ⁻¹	1.71 × 10 ⁻³	7.49 × 10 ⁻¹	4.49 × 10 ⁻³	0.00 × 10 ⁰	fixed	8.65 × 10 ⁻¹	7.03 × 10 ⁻³	6.90 × 10 ⁻¹	2.91 × 10 ⁻²	1.16 × 10 ⁻³	4.93 × 10 ⁻¹	4.17 × 10 ⁻²	1.68 × 10 ⁻⁴	2.60 × 10 ⁻⁵	1.68 × 10 ⁻⁵	1.28 × 10 ⁻⁶	0.99989
4.50	5.14 × 10 ⁻¹	8.99 × 10 ⁻⁴	7.68 × 10 ⁻¹	2.96 × 10 ⁻³	0.00 × 10 ⁰	fixed	5.86 × 10 ⁻¹	2.98 × 10 ⁻³	4.76 × 10 ⁻¹	2.61 × 10 ⁻²	6.06 × 10 ⁻⁴	4.08 × 10 ⁻¹	3.20 × 10 ⁻²	1.32 × 10 ⁻⁴	1.14 × 10 ⁻⁵	1.32 × 10 ⁻⁵	6.39 × 10 ⁻⁷	0.99995
4.75	4.88 × 10 ⁻¹	7.82 × 10 ⁻⁴	7.84 × 10 ⁻¹	3.04 × 10 ⁻³	0.00 × 10 ⁰	fixed	4.12 × 10 ⁻¹	2.03 × 10 ⁻³	3.41 × 10 ⁻¹	2.42 × 10 ⁻²	5.55 × 10 ⁻⁴	3.64 × 10 ⁻¹	3.58 × 10 ⁻²	1.11 × 10 ⁻⁴	9.34 × 10 ⁻⁶	1.11 × 10 ⁻⁵	6.47 × 10 ⁻⁷	0.99996
5.0	4.64 × 10 ⁻¹	7.69 × 10 ⁻⁴	8.04 × 10 ⁻¹	3.29 × 10 ⁻³	0.00 × 10 ⁰	fixed	2.95 × 10 ⁻¹	1.44 × 10 ⁻³	2.49 × 10 ⁻¹	2.35 × 10 ⁻²	6.13 × 10 ⁻⁴	3.89 × 10 ⁻¹	3.79 × 10 ⁻²	1.05 × 10 ⁻⁴	9.63 × 10 ⁻⁶	1.05 × 10 ⁻⁵	5.90 × 10 ⁻⁷	0.99996
5.5	4.22 × 10 ⁻¹	5.80 × 10 ⁻⁴	8.23 × 10 ⁻¹	3.20 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.64 × 10 ⁻¹	7.73 × 10 ⁻⁴	1.41 × 10 ⁻¹	2.01 × 10 ⁻²	4.46 × 10 ⁻⁴	2.34 × 10 ⁻¹	4.19 × 10 ⁻²	9.13 × 10 ⁻⁵	6.83 × 10 ⁻⁶	9.13 × 10 ⁻⁵	7.44 × 10 ⁻⁷	0.99995
6.0	3.89 × 10 ⁻¹	3.68 × 10 ⁻⁴	8.43 × 10 ⁻¹	2.39 × 10 ⁻³	0.00 × 10 ⁰	fixed	9.63 × 10 ⁻²	3.26 × 10 ⁻⁴	8.42 × 10 ⁻²	1.81 × 10 ⁻²	2.94 × 10 ⁻⁴	1.62 × 10 ⁻¹	3.37 × 10 ⁻²	7.80 × 10 ⁻⁵	4.17 × 10 ⁻⁶	7.80 × 10 ⁻⁵	3.46 × 10 ⁻⁷	0.99998
6.5	3.60 × 10 ⁻¹	3.46 × 10 ⁻⁴	8.61 × 10 ⁻¹	2.50 × 10 ⁻³	0.00 × 10 ⁰	fixed	5.92 × 10 ⁻²	1.96 × 10 ⁻⁴	5.26 × 10 ⁻²	1.70 × 10 ⁻²	2.93 × 10 ⁻⁴	1.46 × 10 ⁻¹	3.45 × 10 ⁻²	7.42 × 10 ⁻⁵	3.81 × 10 ⁻⁶	7.42 × 10 ⁻⁵	2.79 × 10 ⁻⁷	0.99998
7.0	3.35 × 10 ⁻¹	2.79 × 10 ⁻⁴	8.70 × 10 ⁻¹	2.21 × 10 ⁻³	0.00 × 10 ⁰	fixed	3.84 × 10 ⁻²	1.10 × 10 ⁻⁴	3.40 × 10 ⁻²	1.55 × 10 ⁻²	2.42 × 10 ⁻⁴	9.28 × 10 ⁻²	3.20 × 10 ⁻²	6.85 × 10 ⁻⁵	2.98 × 10 ⁻⁶	6.85 × 10 ⁻⁵	1.79 × 10 ⁻⁷	0.99999
7.5	3.13 × 10 ⁻¹	6.40 × 10 ⁻⁴	8.84 × 10 ⁻¹	5.63 × 10 ⁻³	0.00 × 10 ⁰	fixed	2.57 × 10 ⁻²	1.80 × 10 ⁻⁴	2.33 × 10 ⁻²	1.50 × 10 ⁻²	5.66 × 10 ⁻⁴	0.00 × 10 ⁰	5.80 × 10 ⁻²	9.80 × 10 ⁻⁵	6.82 × 10 ⁻⁶	9.80 × 10 ⁻⁵	9.20 × 10 ⁻⁷	0.99993
8.0	2.93 × 10 ⁻¹	4.34 × 10 ⁻⁴	8.97 × 10 ⁻¹	4.69 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.79 × 10 ⁻²	1.10 × 10 ⁻⁴	1.64 × 10 ⁻²	1.49 × 10 ⁻²	3.60 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	9.42 × 10 ⁻⁵	6.15 × 10 ⁻⁶	9.42 × 10 ⁻⁵	7.40 × 10 ⁻⁷	0.99994
8.5	2.76 × 10 ⁻¹	4.52 × 10 ⁻⁴	9.02 × 10 ⁻¹	5.09 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.29 × 10 ⁻²	8.23 × 10 ⁻⁵	1.19 × 10 ⁻²	1.42 × 10 ⁻²	3.91 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	1.02 × 10 ⁻⁵	6.53 × 10 ⁻⁶	1.02 × 10 ⁻⁵	6.53 × 10 ⁻⁷	0.99994
9.0	2.62 × 10 ⁻¹	2.95 × 10 ⁻⁴	9.06 × 10 ⁻¹	3.52 × 10 ⁻³	0.00 × 10 ⁰	fixed	9.51 × 10 ⁻³	4.15 × 10 ⁻⁵	8.80 × 10 ⁻³	1.28 × 10 ⁻²	2.58 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	7.65 × 10 ⁻⁵	4.07 × 10 ⁻⁶	7.65 × 10 ⁻⁵	2.69 × 10 ⁻⁷	0.99997
9.5	2.48 × 10 ⁻¹	3.48 × 10 ⁻⁴	9.10 × 10 ⁻¹	4.32 × 10 ⁻³	0.00 × 10 ⁰	fixed	7.18 × 10 ⁻³	3.70 × 10 ⁻⁵	6.67 × 10 ⁻³	1.24 × 10 ⁻²	3.12 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	7.21 × 10 ⁻⁵	4.60 × 10 ⁻⁶	7.21 × 10 ⁻⁵	3.18 × 10 ⁻⁷	0.99997
10	2.35 × 10 ⁻¹	6.42 × 10 ⁻⁴	9.24 × 10 ⁻¹	7.97 × 10 ⁻³	0.00 × 10 ⁰	fixed	5.49 × 10 ⁻³	4.82 × 10 ⁻⁵	5.16 × 10 ⁻³	1.31 × 10 ⁻²	5.96 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	9.50 × 10 ⁻⁵	7.94 × 10 ⁻⁶	9.50 × 10 ⁻⁵	7.02 × 10 ⁻⁷	0.99992
11	2.16 × 10 ⁻¹	3.85 × 10 ⁻⁴	9.21 × 10 ⁻¹	5.04 × 10 ⁻³	0.00 × 10 ⁰	fixed	3.45 × 10 ⁻³	1.95 × 10 ⁻⁵	3.24 × 10 ⁻³	1.07 × 10 ⁻²	3.43 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	4.60 × 10 ⁻⁵	4.30 × 10 ⁻⁶	4.60 × 10 ⁻⁵	2.29 × 10 ⁻⁷	0.99996
12	1.95 × 10 ⁻¹	1.06 × 10 ⁻³	9.66 × 10 ⁻¹	1.35 × 10 ⁻²	0.00 × 10 ⁰	fixed	2.19 × 10 ⁻³	2.63 × 10 ⁻⁵	2.13 × 10 ⁻³	1.36 × 10 ⁻²	1.01 × 10 ⁻³	0.00 × 10 ⁰	fixed	9.41 × 10 ⁻⁵	8.31 × 10 ⁻⁶	9.41 × 10 ⁻⁵	5.25 × 10 ⁻⁷	0.99991
13	1.78 × 10 ⁻¹	6.37 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	1.45 × 10 ⁻³	1.11 × 10 ⁻⁵	1.45 × 10 ⁻³	1.03 × 10 ⁻²	4.09 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	5.74 × 10 ⁻⁶	1.71 × 10 ⁻⁶	5.74 × 10 ⁻⁶	2.71 × 10 ⁻⁶	0.99918
14	1.67 × 10 ⁻¹	3.93 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	1.04 × 10 ⁻³	5.40 × 10 ⁻⁶	1.04 × 10 ⁻³	9.89 × 10 ⁻³	2.73 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	5.57 × 10 ⁻⁶	1.13 × 10 ⁻⁶	5.57 × 10 ⁻⁶	1.10 × 10 ⁻⁶	0.99965
15	1.55 × 10 ⁻¹	4.45 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	7.59 × 10 ⁻⁴	4.84 × 10 ⁻⁶	7.59 × 10 ⁻⁴	9.56 × 10 ⁻³	3.31 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	5.61 × 10 ⁻⁶	1.35 × 10 ⁻⁶	5.61 × 10 ⁻⁶	1.44 × 10 ⁻⁶	0.99952
16	1.46 × 10 ⁻¹	4.41 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	5.68 × 10 ⁻⁴	3.85 × 10 ⁻⁶	5.68 × 10 ⁻⁴	9.29 × 10 ⁻³	3.47 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	5.67 × 10 ⁻⁶	1.39 × 10 ⁻⁶	5.67 × 10 ⁻⁶	1.40 × 10 ⁻⁶	0.99950
17	1.37 × 10 ⁻¹	5.96 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	4.25 × 10 ⁻⁴	4.11 × 10 ⁻⁶	4.25 × 10 ⁻⁴	9.11 × 10 ⁻³	4.94 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	5.79 × 10 ⁻⁶	1.92 × 10 ⁻⁶	5.79 × 10 ⁻⁶	2.46 × 10 ⁻⁶	0.99907
18	1.29 × 10 ⁻¹	7.12 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	3.18 × 10 ⁻⁴	3.85 × 10 ⁻⁶	3.18 × 10 ⁻⁴	8.73 × 10 ⁻³	6.19 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	5.75 × 10 ⁻⁶	2.36 × 10 ⁻⁶	5.75 × 10 ⁻⁶	3.25 × 10 ⁻⁶	0.99867
19	1.23 × 10 ⁻¹	4.28 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	2.39 × 10 ⁻⁴	1.77 × 10 ⁻⁶	2.39 × 10 ⁻⁴	9.18 × 10 ⁻³	3.90 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	6.41 × 10 ⁻⁶	1.33 × 10 ⁻⁶	6.41 × 10 ⁻⁶	1.01 × 10 ⁻⁶	0.99957
20	1.16 × 10 ⁻¹	4.72 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	1.75 × 10 ⁻⁴	1.39 × 10 ⁻⁶	1.75 × 10 ⁻⁴	9.80 × 10 ⁻³	4.54 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	8.10 × 10 ⁻⁶	1.34 × 10 ⁻⁶	8.10 × 10 ⁻⁶	8.76 × 10 ⁻⁷	0.99960
21	1.08 × 10 ⁻¹	6.66 × 10 ⁻⁴	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	1.25 × 10 ⁻⁴	1.25 × 10 ⁻⁶	1.25 × 10 ⁻⁴	1.10 × 10 ⁻²	6.67 × 10 ⁻⁴	0.00 × 10 ⁰	fixed	1.04 × 10 ⁻⁵	1.53 × 10 ⁻⁶	1.04 × 10 ⁻⁵	8.84 × 10 ⁻⁷	0.99957
22	9.98 × 10 ⁻²	1.09 × 10 ⁻³	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	9.21 × 10 ⁻⁵	1.22 × 10 ⁻⁶	9.21 × 10 ⁻⁵	1.54 × 10 ⁻²	1.11 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.36 × 10 ⁻⁵	1.50 × 10 ⁻⁶	1.36 × 10 ⁻⁵	7.58 × 10 ⁻⁷	0.99962
23	8.77 × 10 ⁻²	3.45 × 10 ⁻³	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	6.63 × 10 ⁻⁵	2.21 × 10 ⁻⁶	6.63 × 10 ⁻⁵	2.23 × 10 ⁻²	3.49 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.54 × 10 ⁻⁵	2.46 × 10 ⁻⁶	1.54 × 10 ⁻⁵	1.74 × 10 ⁻⁶	0.99909
24	7.30 × 10 ⁻²	5.36 × 10 ⁻³	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	4.87 × 10 ⁻⁵	2.28 × 10 ⁻⁶	4.87 × 10 ⁻⁵	3.24 × 10 ⁻²	5.40 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.49 × 10 ⁻⁵	1.94 × 10 ⁻⁶	1.49 × 10 ⁻⁵	1.13 × 10 ⁻⁶	0.99939
25	5.80 × 10 ⁻²	1.70 × 10 ⁻³	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	3.65 × 10 ⁻⁵	2.87 × 10 ⁻⁶	3.65 × 10 ⁻⁵	4.34 × 10 ⁻²	8.73 × 10 ⁻³	0.00 × 10 ⁰	fixed	1.29 × 10 ⁻⁵	1.76 × 10 ⁻⁶	1.29 × 10 ⁻⁵	1.04 × 10 ⁻⁶	0.99942
26	4.73 × 10 ⁻²	1.33 × 10 ⁻²	1.00 × 10 ⁰	fixed	0.00 × 10 ⁰	fixed	2.70 × 10 ⁻⁵	3.51 × 10 ⁻⁶	2.70 × 10 ⁻⁵	5.07 × 10 ⁻²	1.33 × 10 ⁻²	0.00 × 10 ⁰	fixed	1.01 × 10 ⁻⁵	1.77 × 10 ⁻⁶	1.01 × 10 ⁻⁵	1.03 × 10 ⁻⁶	0.99943

Table S8. Summary of the parameters obtained for **2-Co_{0.1}Zn_{0.9}** without external magnetic field from two relaxation time Havriliak-Negami model. χ_{adia} was fixed to zero, and β was fixed to 1 to avoid overparameterisation.

T (K)	First peak											Reduced Chi-Sqr	Adj. R-Square
	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	χ_{iso} (cm ³ ·mol ⁻¹)	β	β	α	α	τ (s)	τ (s)	$\tau_{\text{corrected}}$ (s)		
	Value	Standard error	Value	Standard error	Value	Standard error	Value	Standard error	Value	Standard error			
1.85	1.51×10^{-3}	3.59×10^{-4}	1.20×10^{-1}	2.93×10^{-2}	0.69	2.35×10^{-1}	5.54×10^{-1}	1.24×10^{-1}	2.12×10^1	8.62×10^0	9.56×10^0	1.23×10^{-7}	0.99884
2.15	1.24×10^{-3}	2.74×10^{-4}	1.05×10^{-1}	2.68×10^{-2}	0.61	2.02×10^{-1}	5.03×10^{-1}	1.39×10^{-1}	2.52×10^1	1.35×10^1	9.91×10^0	8.76×10^{-8}	0.99891
2.5	9.26×10^{-4}	1.72×10^{-4}	8.92×10^{-1}	2.34×10^{-2}	0.43	1.34×10^{-1}	3.17×10^{-1}	1.93×10^{-1}	2.68×10^1	2.03×10^1	8.85×10^0	5.46×10^{-8}	0.99915
2.8	1.15×10^{-3}	1.05×10^{-4}	7.42×10^{-1}	1.62×10^{-2}	0.31	7.83×10^{-2}	0.00×10^0	2.38×10^{-1}	1.59×10^1	1.04×10^1	6.23×10^0	4.00×10^{-8}	0.99930
3.15	1.66×10^{-3}	9.58×10^{-5}	7.16×10^{-2}	1.00×10^{-2}	0.35	5.91×10^{-2}	0.00×10^0	1.56×10^{-1}	1.04×10^1	3.70×10^0	4.52×10^0	4.70×10^{-8}	0.99918
3.5	2.13×10^{-3}	1.14×10^{-4}	5.99×10^{-2}	3.34×10^{-3}	0.41	3.70×10^{-2}	0.00×10^0	7.71×10^{-2}	4.12×10^0	4.15×10^{-1}	2.01×10^0	9.41×10^{-8}	0.99854
4.0	2.41×10^{-3}	1.11×10^{-4}	4.99×10^{-2}	8.15×10^{-4}	0.49	2.20×10^{-2}	0.00×10^0	3.07×10^{-2}	1.42×10^0	3.78×10^{-2}	8.04×10^{-1}	1.28×10^{-7}	0.99851
4.5	2.30×10^{-3}	9.84×10^{-5}	4.35×10^{-2}	3.28×10^{-4}	0.55	1.72×10^{-2}	0.00×10^0	1.75×10^{-2}	6.29×10^{-1}	1.66×10^{-2}	3.94×10^{-1}	1.13×10^{-7}	0.99890
5.0	2.16×10^{-3}	9.70×10^{-5}	3.91×10^{-2}	2.08×10^{-4}	0.60	1.67×10^{-2}	0.00×10^0	1.39×10^{-2}	3.18×10^{-1}	8.83×10^{-3}	2.11×10^{-1}	1.07×10^{-7}	0.99906
5.5	1.95×10^{-3}	8.27×10^{-5}	3.56×10^{-2}	1.39×10^{-4}	0.64	1.51×10^{-2}	0.00×10^0	1.07×10^{-2}	1.73×10^{-1}	4.32×10^{-3}	1.21×10^{-1}	7.51×10^{-8}	0.99935
6.0	1.70×10^{-3}	9.03×10^{-5}	3.27×10^{-2}	1.29×10^{-4}	0.66	1.69×10^{-2}	0.00×10^0	1.09×10^{-2}	1.02×10^{-1}	2.86×10^{-3}	7.36×10^{-2}	7.96×10^{-8}	0.99930
6.5	1.53×10^{-3}	7.92×10^{-5}	3.03×10^{-2}	1.03×10^{-4}	0.69	1.57×10^{-2}	0.00×10^0	9.14×10^{-3}	6.28×10^{-2}	1.59×10^{-3}	4.68×10^{-2}	5.61×10^{-8}	0.99948
7.0	1.36×10^{-3}	6.05×10^{-5}	2.82×10^{-2}	7.35×10^{-5}	0.72	1.28×10^{-2}	0.00×10^0	6.78×10^{-3}	4.01×10^{-2}	8.00×10^{-4}	3.09×10^{-2}	3.00×10^{-8}	0.99971
7.5	1.32×10^{-3}	5.20×10^{-5}	2.63×10^{-2}	6.07×10^{-5}	0.76	1.21×10^{-2}	0.00×10^0	5.74×10^{-3}	2.60×10^{-2}	4.67×10^{-4}	2.11×10^{-2}	2.10×10^{-8}	0.99978
8.0	9.81×10^{-4}	5.78×10^{-5}	2.49×10^{-2}	6.59×10^{-5}	0.74	1.35×10^{-2}	0.00×10^0	6.62×10^{-3}	1.91×10^{-2}	3.94×10^{-4}	1.51×10^{-2}	2.49×10^{-8}	0.99971
8.5	8.24×10^{-4}	5.98×10^{-5}	2.35×10^{-2}	6.58×10^{-5}	0.75	1.42×10^{-2}	0.00×10^0	6.68×10^{-3}	1.38×10^{-2}	2.95×10^{-4}	1.09×10^{-2}	2.33×10^{-8}	0.99971
9.0	6.66×10^{-4}	6.53×10^{-5}	2.23×10^{-2}	6.97×10^{-5}	0.74	1.54×10^{-2}	0.00×10^0	7.07×10^{-3}	1.03×10^{-2}	2.39×10^{-4}	8.16×10^{-3}	2.36×10^{-8}	0.99968
9.5	7.22×10^{-4}	4.72×10^{-5}	2.10×10^{-2}	5.01×10^{-5}	0.80	1.25×10^{-2}	0.00×10^0	5.14×10^{-3}	7.31×10^{-3}	1.29×10^{-4}	6.13×10^{-3}	1.22×10^{-8}	0.99982
10	5.10×10^{-4}	5.03×10^{-5}	2.01×10^{-2}	5.21×10^{-5}	0.79	1.29×10^{-2}	0.00×10^0	5.24×10^{-3}	5.75×10^{-3}	1.06×10^{-4}	4.76×10^{-3}	1.14×10^{-8}	0.99982
11	1.22×10^{-4}	1.04×10^{-4}	1.86×10^{-2}	1.06×10^{-6}	0.75	2.53×10^{-2}	0.00×10^0	1.08×10^{-2}	3.78×10^{-3}	1.37×10^{-4}	3.01×10^{-3}	3.07×10^{-8}	0.99930
12	1.61×10^{-4}	4.20×10^{-5}	1.70×10^{-2}	4.18×10^{-5}	0.80	1.12×10^{-2}	0.00×10^0	4.12×10^{-3}	2.33×10^{-3}	3.49×10^{-5}	1.96×10^{-3}	4.12×10^{-9}	0.99990
13	0.00×10^0	7.52×10^{-5}	1.57×10^{-2}	7.34×10^{-5}	0.80	1.92×10^{-2}	0.00×10^0	6.50×10^{-3}	1.54×10^{-3}	3.88×10^{-5}	1.28×10^{-3}	8.58×10^{-9}	0.99975
14	0.00×10^0	8.08×10^{-5}	1.46×10^{-2}	7.84×10^{-5}	0.81	2.09×10^{-2}	0.00×10^0	6.32×10^{-3}	1.08×10^{-3}	2.84×10^{-5}	9.13×10^{-4}	7.03×10^{-9}	0.99978
15	0.00×10^0	8.70×10^{-5}	1.37×10^{-2}	8.44×10^{-5}	0.88	2.50×10^{-2}	1.13×10^{-2}	6.16×10^{-3}	7.24×10^{-4}	2.11×10^{-5}	6.53×10^{-4}	5.99×10^{-9}	0.99979
16	0.00×10^0	3.14×10^{-4}	1.30×10^{-2}	3.05×10^{-4}	0.82	7.64×10^{-2}	2.72×10^{-3}	1.85×10^{-2}	5.80×10^{-4}	5.26×10^{-5}	4.94×10^{-4}	4.24×10^{-8}	0.99835
17	0.00×10^0	fixed	1.21×10^{-2}	3.31×10^{-5}	1.00	3.89×10^{-2}	3.47×10^{-2}	1.16×10^{-2}	3.35×10^{-4}	1.65×10^{-5}	3.35×10^{-4}	2.26×10^{-8}	0.99903
18	0.00×10^0	fixed	1.14×10^{-2}	1.76×10^{-5}	1.00	fixed	2.58×10^{-2}	3.27×10^{-3}	2.78×10^{-4}	1.53×10^{-6}	2.78×10^{-4}	7.58×10^{-9}	0.99965
19	0.00×10^0	fixed	1.08×10^{-2}	1.86×10^{-5}	1.00	fixed	9.43×10^{-3}	3.88×10^{-3}	2.15×10^{-4}	1.36×10^{-6}	2.15×10^{-4}	8.95×10^{-9}	0.99956
20	0.00×10^0	fixed	1.02×10^{-2}	1.48×10^{-5}	1.00	fixed	1.03×10^{-2}	3.54×10^{-3}	1.65×10^{-4}	9.44×10^{-7}	1.65×10^{-4}	5.85×10^{-9}	0.99969
22	0.00×10^0	fixed	9.30×10^{-3}	2.09×10^{-5}	1.00	fixed	1.14×10^{-2}	5.85×10^{-3}	9.48×10^{-5}	8.49×10^{-7}	9.48×10^{-5}	7.10×10^{-9}	0.99954
24	0.00×10^0	fixed	8.57×10^{-3}	2.09×10^{-5}	1.00	fixed	7.34×10^{-3}	8.98×10^{-3}	5.80×10^{-5}	8.77×10^{-7}	5.80×10^{-5}	7.44×10^{-9}	0.99949
26	0.00×10^0	fixed	7.88×10^{-3}	1.73×10^{-5}	1.00	fixed	1.51×10^{-2}	1.33×10^{-2}	3.21×10^{-5}	8.86×10^{-7}	3.21×10^{-5}	5.12×10^{-9}	0.99963
28	0.00×10^0	fixed	7.34×10^{-3}	1.63×10^{-5}	1.00	fixed	6.44×10^{-2}	2.24×10^{-2}	1.66×10^{-5}	1.02×10^{-6}	1.66×10^{-5}	4.35×10^{-9}	0.99965
30	0.00×10^0	fixed	6.87×10^{-3}	1.46×10^{-5}	1.00	fixed	1.28×10^{-1}	3.32×10^{-2}	8.31×10^{-6}	9.97×10^{-7}	8.31×10^{-6}	3.21×10^{-9}	0.99972

