

Metallic Conduction and Carrier Localization in Two-Dimensional BEDO-TTF Charge-Transfer Solid Crystals

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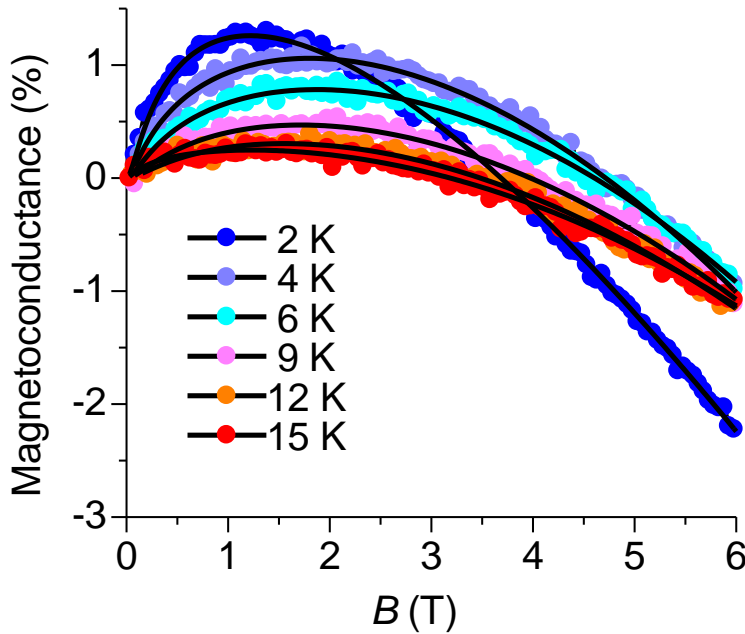


Figure S1: A typical fitting result for the magnetoconductance $[\sigma(B)-\sigma(B=0)]/\sigma(B=0)$ of β'' -BO3 #1 along the weak 2D localization model under the perpendicular magnetic field. Black lines represent fit curves with respect to Eq. (1). Obtained parameters by this fitting result are given in Table S1.

Table S1. Parameters, A_1 , A_2 , B_i , and α and the phase coherence length λ obtained by the fitting of the magnetoconductance of β'' -BO3 shown in Figure S1.

	A_1	A_2	B_i (T)	α	λ (nm)
2 K	0.0093	0.0046	0.026	1.39	80
4 K	0.0062	0.00092	0.031	1.95	73
6 K	0.0051	0.00059	0.040	2.08	63
9 K	0.0065	0.0012	0.094	1.71	42
12 K	0.0063	0.0012	0.129	1.69	36
15 K	0.0034	0.00087	0.074	1.75	47

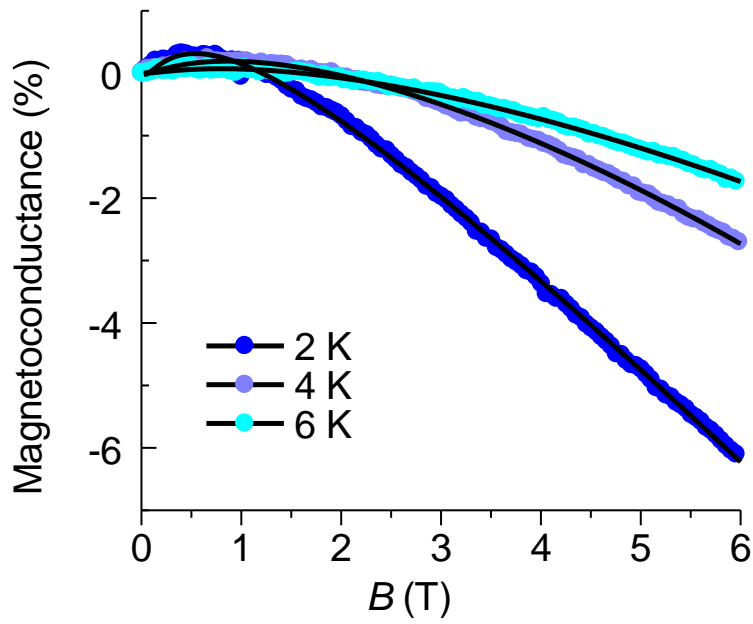


Figure S2: A typical fitting result for the magnetoconductance $[\sigma(B)-\sigma(B=0)]/\sigma(B=0)$ of β'' -BO3 #2 along the weak 2D localization model under the perpendicular magnetic field. Black lines represent fit curves with respect to Eq. (1). Obtained parameters by this fitting result are given in Table S2.

Table S2. Parameters, A_1 , A_2 , B_i , and α and the phase coherence length λ obtained by the fitting of the magnetoconductance of β'' -BO3 #2 shown in Figure S2.

	A_1	A_2	B_i (T)	α	λ (nm)
2 K	0.013	0.017	0.040	1.00	64
4 K	0.0046	0.0026	0.074	1.52	47
6 K	0.0025	0.0014	0.093	1.58	42

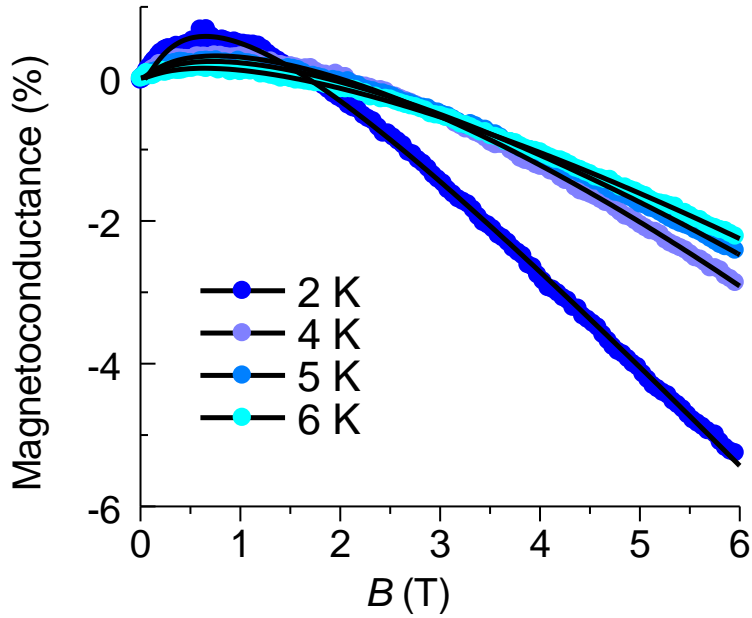


Figure S3: A typical fitting result for the magnetoconductance $[\sigma(B)-\sigma(B=0)]/\sigma(B=0)$ of β'' -BO3 #3 along the weak 2D localization model under the perpendicular magnetic field. Black lines represent fit curves with respect to Eq. (1). Obtained parameters by this fitting result are given in Table S3.

Table S3: Parameters, A_1 , A_2 , B_i , and α and the phase coherence length λ obtained by the fitting of the magnetoconductance of κ -BO2 #3 shown in Figure S3.

	A_1	A_2	B_i (T)	α	λ (nm)
2 K	0.015	0.018	0.035	0.96	68
4 K	0.011	0.0083	0.065	1.08	50
5 K	0.0086	0.0063	0.070	1.12	48
6 K	0.0075	0.0052	0.085	1.14	44

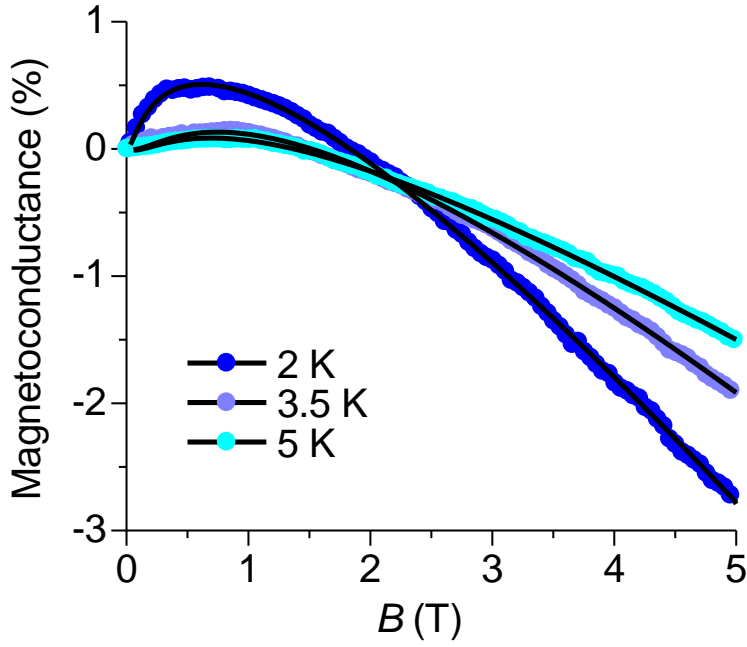


Figure S4: A typical fitting result for the magnetoconductance $[\sigma(B)-\sigma(B=0)]/\sigma(B=0)$ of κ -BO2 #1 along the weak 2D localization model under the perpendicular magnetic field. Black lines represent fit curves with respect to Eq. (1). Obtained parameters by this fitting result are given in Table S4.

Table S4: Parameters, A_1 , A_2 , B_i , and α and the phase coherence length λ obtained by the fitting of the magnetoconductance of κ -BO2 shown in Figure S4.

	A_1	A_2	B_i (T)	α	λ (nm)
2 K	0.0057	0.0073	0.020	1.17	91
3.5 K	0.0075	0.0055	0.082	1.16	45
5 K	0.0060	0.0051	0.076	1.08	47

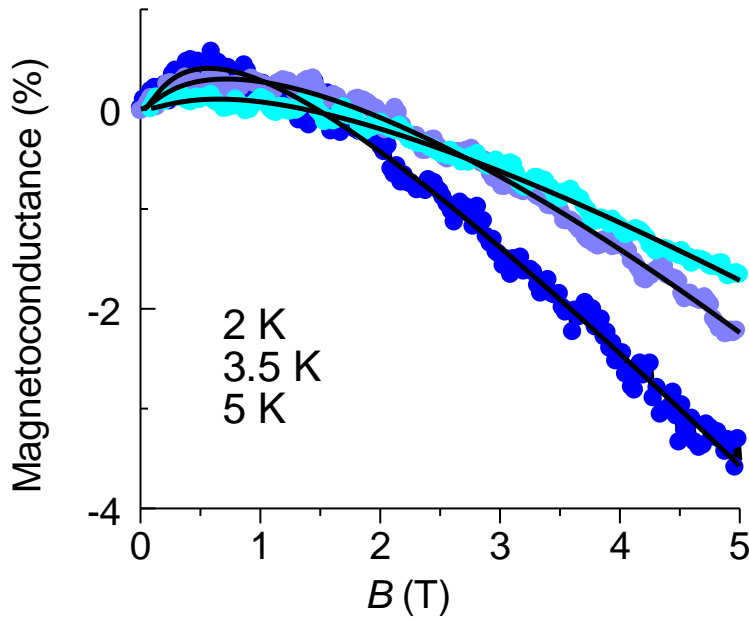


Figure S5: A typical fitting result for the magnetoconductance $[\sigma(B)-\sigma(B=0)]/\sigma(B=0)$ of κ -BO2 #3 along the weak 2D localization model under the perpendicular magnetic field. Black lines represent fit curves with respect to Eq. (1). Obtained parameters by this fitting result are given in Table S5.

Table S5: Parameters, A_1 , A_2 , B_i , and α and the phase coherence length λ obtained by the fitting of the magnetoconductance of κ -BO2 #3 shown in Figure S5.

	A_1	A_2	B_i (T)	α	λ (nm)
2 K	0.0095	0.013	0.031	1.02	73
3.5 K	0.0045	0.0041	0.036	1.34	68
5 K	0.0044	0.0037	0.068	1.24	49