Supplementary Material

Direct evidence for heme-assisted solid-state electronic conduction in multi-heme *c*-type cytochromes

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Supplementary figures:

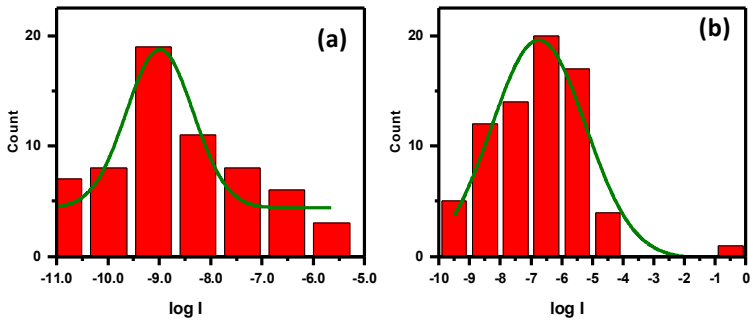

Figure S1. *Statistics of I-V measurements by nanowire method at 0.5V; (a) MtrF (b) STC.*

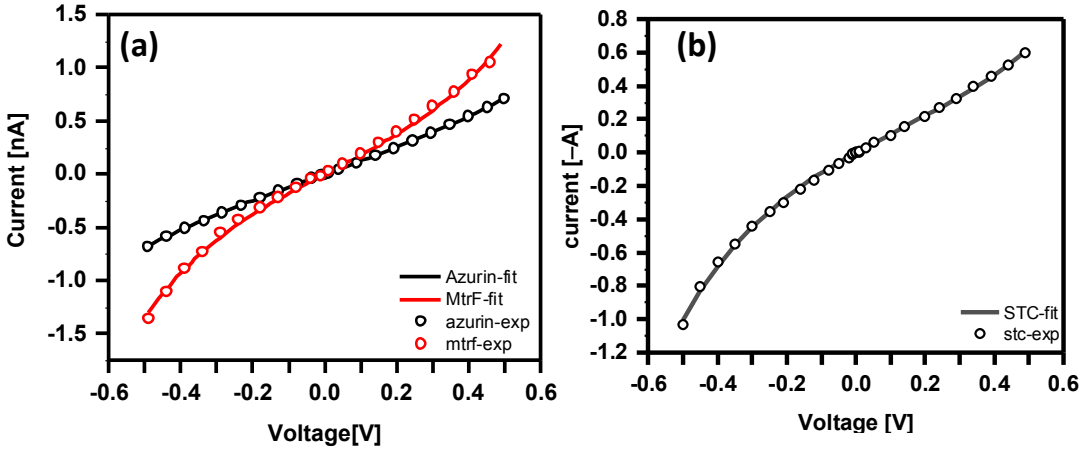

Figure S2. *Coherent tunneling current fitting of experimental of I-V data by nanowire method; (a) MtrF and azurin (b) STC.*

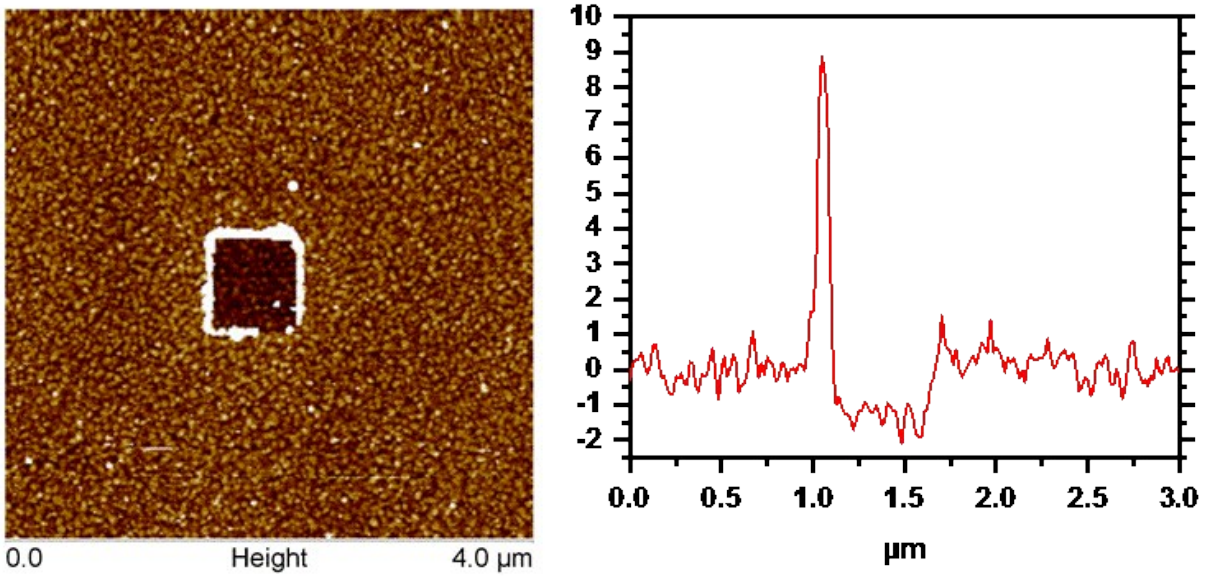

Figure S3. *AFM scratching of STC monolayers*

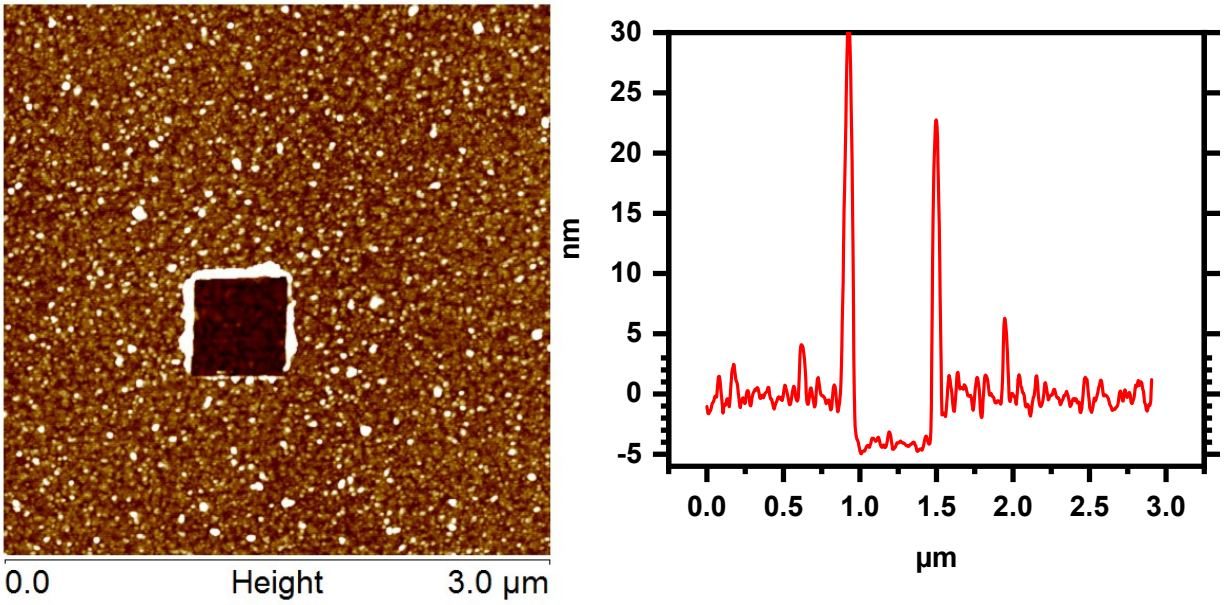

Figure S4. *AFM scratching of MtrF monolayers*

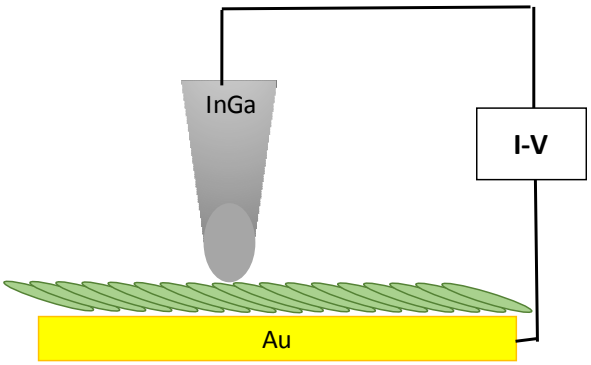

Figure S5. *I-V measurement setup for InGa top contact*

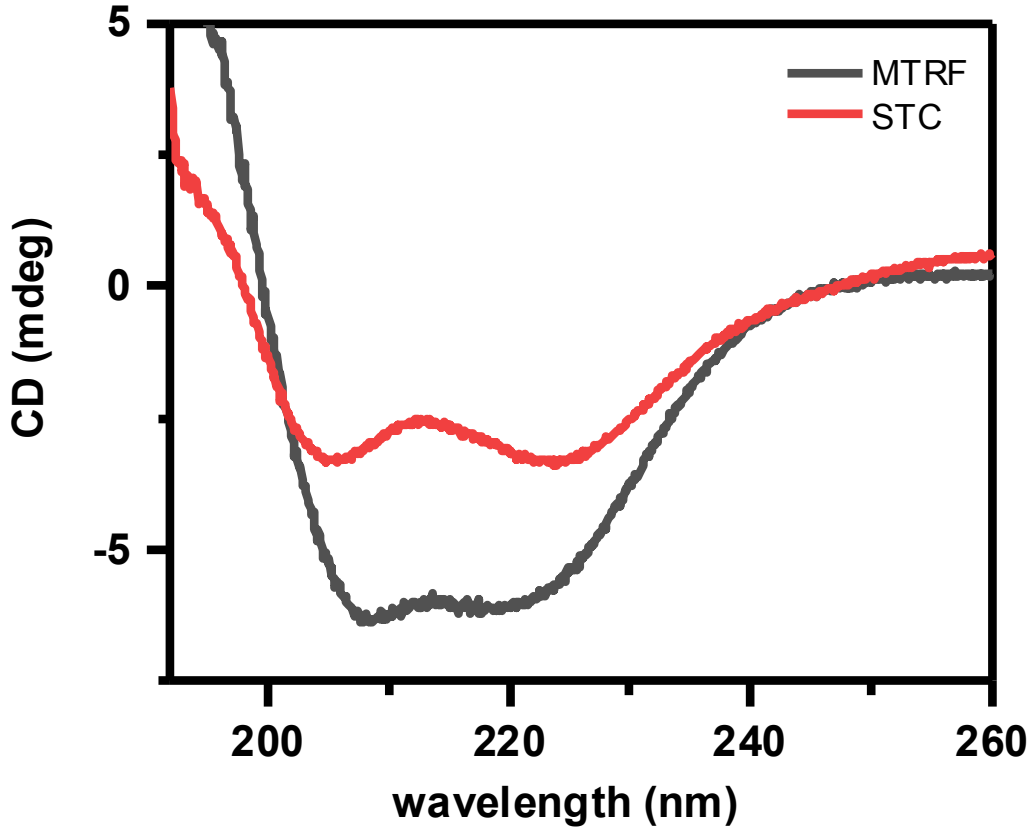

Figure S6. *CD of MtrF and of STC in solution.*

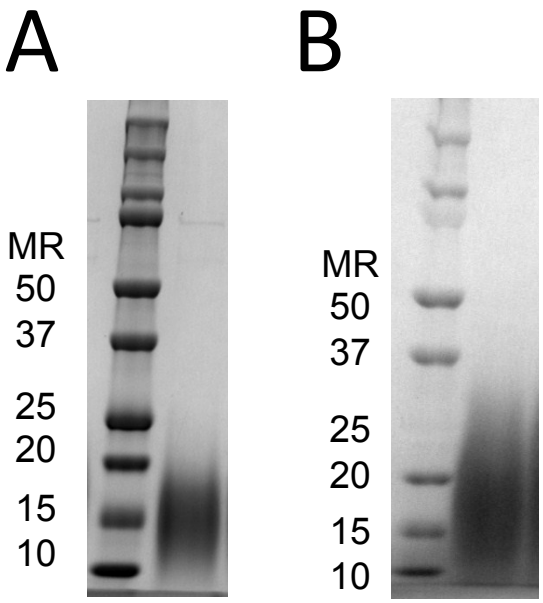

Figure S7. *SDS-PAGE gels for purified S87C STC with molecular weight markers (kDa). To obtain monomeric forms, 1 mM TCEP was added to S87C STC prior to loading. A] Coomassie stained, B] Heme stained.*

Table S1: Summary of fit parameters for coherent tunneling model, Eqs. S1-S3.

	STC	MtrF	Azurin
L (nm)	1.22	1.56	1.21
ϕ (eV)	1.13	1.53	2.77
α	0.42	0.49	0.51
corr[a]	0.999	0.999	0.9999

[a]correlation coefficient.