List of abbreviations and symbols

[*x*Fe-*y*S]	Iron-sulfur cluster
9-BBN	9-Borabicyclo(3.3.1)nonaan
A	Electrode surface area [m^2]
AcOH	Acetic acid
AcSH	Thioacetic acid
α	Electron transfer coefficient
ATP	Adenosine triphosphate
β	Decay constant [$Å^{-1}$]
Bis-Tris	2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol
calcd.	Calculated
CAN	Ceric ammonium nitrate
cat.	Catalytic (amount)
CE	Counter electrode
d	Doublet (NMR)
DCAD	Di-(4-chlorobenzyl)-azodicarboxylate
DCM	Dichloromethane
dd	Double doublet (NMR)
DEAD	Diethyl azodicarboxylate
DEAE	Diethyl aminoethanol
δ	Chemical shift
ΔEp	E_{pa} - E_{pc} [V]
DIBAL-H	Diisobutylaluminium hydride
DMA	Dimethylacetamide
DMF	Dimethylformamide
Dms(A-C)	DMSO reductase subunit
DMS	Dimethyl sulfide
DMSO	Dimethyl sulfoxide
dt	Double triplet (NMR)
E	Applied potential [V]
E. coli	*Escherichia coli*
$E^{0'}$	Equilibrium (midpoint) potential [V]
$E_i^{0'}$	Microscopic equilibrium potential [V] (PCET model)
EDTA	Ethylenediaminetetraacetic acid
E_p, E_{peak}	Peak position [V]
E_{pa}	Anodic peak position [V]
E_{pc}	Cathodic peak position [V]

E^Q/E^{SQ}	Midpoint potential of quinone/semiquinone redox pair [V]
E^{SQ}/E^{QH2}	Midpoint potential of semiquinone/quinol redox pair [V]
Et_3N	Triethylamine
EtOAc	Ethyl acetate
EtOH	Ethanol
F	Faraday constant (96485… C/mol)
FAD	Flavin adenine dinucleotide
Fc	Ferrocene
Frd(A-D)	Fumarate reductase subunit
FWHM	Full width at half maximum
Γ	Surface coverage
h	Hour(s)
HEPES	2-[4-(2-hydroxyethyl)piperazin-1-yl]ethanesulfonic acid
His_6	Polyhistidine tag of length six
HQ	Hydroquinone
HQNO	N-oxo-2-heptyl-4-hydroxyquinoline
HR-MS	High resolution mass spectrometry
i	Current [A]
I	Ionic strength
i_{cat}	(Maximum) enzymatic catalytic current [A]
i-PrOH	Isopropanol
J	Coupling constant [Hz]
k_0	Standard rate constant (Butler-Volmer kinetics) [s^{-1}]
k_{app}	Apparent electron transfer rate constant [s^{-1}]
k_{cat}	Apparent unimolecular rate constant/turnover number [s^{-1}]
k_{enz}	Catalytic (enzymatic) rate constant [s^{-1}]
K_M	Michaelis constant [M]
k_s	Microscopic ‘pure-electron’ rate constant [s^{-1}]
KSAc	Potassium thioacetate
λ	Reorganization energy [eV]
λ_{max}	Wavelength at maximum absorbance [nm]
LB	Lysogeny broth
m	Multiplet (NMR)
m/z	Mass-to-charge ratio
$\mathbf{M_{0\text{-}3}}$	Menaquinone-terminated OPV-based molecular wire; number indicates length of OPV system
MeOH	Methanol
min	Minute(s)
MK/MKH_2	Menaquinone/menaquinol
MOPS	3-Morpholinopropane-1-sulfonic acid

MQ/MQH_2	Menaquinone/menaquinol
n	Number of electrons participating in a redox process
N_A	Avogadro constant (6.022… × 10^{23} mol^{-1})
NADH	Nicotinamide adenine dinucleotide
n_{app}	Apparent number of electrons participating in a redox process
NBu_3	Tributylamine
n-BuLi	*n*-Butyllithium
NHE	Normal hydrogen electrode
NMe_3	Trimethylamine
NMR	Nuclear magnetic resonance (spectroscopy)
norm.	Normalized
OPV	Oligo(phenylenevinylene)
PCET	Proton-coupled electron transfer
PCR	Polymerase Chain Reaction
$Pd(OAc)_2$	Palladium (II) acetate
PET	Petroleum ether
PFV	Protein film voltammetry
PIFA	(Bis(trifluoroacetoxy)iodo)benzene
pK_{ai}	Microscopic acid dissociation constant (PCET model)
PMSF	Phenylmethane sulfonyl fluoride
PPh_3	Triphenyl phosphate
ppm	Parts per million
q	Quartet (NMR)
Q/QH_2	(Ubi)quinone/(ubi)quinol
Q_H	High-affinity (ubi)quinone binding site of cytochrome bo_3
Q_L	Low-affinity (ubi)quinone binding site of cytochrome bo_3
Q-wire	Ubiquinone- or menaquinone-terminated OPV-based molecular wire, functionalized with a gold electrode-binding thiol at the opposite end
R	Gas constant (8.3145… J mol^{-1} K^{-1})
RE	Reference electrode
R_G	Radius of gyration
ρ	Electrode surface roughness factor
rpm	Rotations per minute
RT	Room temperature (298 K)
s	Singlet (NMR)
SAM	Self-assembled monolayer
sat.	Saturated
SCE	Saturated calomel electrode

Sdh(A-D)	Succinate dehydrogenase subunit
SQ	Semiquinone
t	Triplet (NMR)
T	Absolute temperature [K]
t-BuOK	Potassium *tert*-butoxide
THF	Tetrahydrofuran
TLC	Thin layer chromatography
TMAO	Trimethylamine *N*-oxide
Tris	2-Amino-2-(hydroxymethyl)propane-1,3-diol
$\mathbf{U_{0\text{-}3}}$	Ubiquinone-terminated OPV-based molecular wire; number indicates length of OPV system
UQ/UQH_2	Ubiquinone/ubiquinol
$\mathbf{U_{sat}}$	Ubiquinone-terminated decanethiol
UV-Vis	Ultraviolet–visible (spectroscopy)
v	Scan rate [V/s]
v_a	Anodic critical scan rate [V/s]
v_c	Cathodic critical scan rate [V/s]
WE	Working electrode