Abbreviations

Chl*a*	chlorophyll *a*
CP	chlorophyll binding protein
Cyt	cytochrome
E_m	electrochemical midpoint potential
EM	electron microscopy
EPR	electron paramagnetic resonance
ETC	electron transfer chain
EXAFS	extended X-ray absorption fine structure spectroscopy
FD	ferredoxin
FTIR	Fourier transform infrared spectroscopy
H-bond	hydrogen bond
LHC	light-harvesting complex
MALDI-TOF	matrix assisted laser desorption ionisation time of flight
MPD	2-methyl-2,4-pentandiol
MSP	manganese stabilizing protein
NCS	non-crystallographic symmetry
OEC	oxygen evolving centre
P	primary electron donor
PbRC	purple bacterial reaction centre
PC	plastocyanine
PEG	polyethylen glycol
Pheo*a*	pheophytin *a*
PS	photosystem
PSIIcc	photosystem II core complex
PsaA-Z	protein encoded by the corresponding PSI gene *psaA*-Z
PsbA-Z	protein encoded by the corresponding PSII gene *psbA*-Z
Q	plastoquinone
RC	reaction centre
rmsd	root mean square deviation
B. viridis	*Blastochloris viridis*
R. viridis	*Rhodopseudomonas viridis*
R. sphaeroides	*Rodopseudomonas sphaeroides*

T. vulcanus	*Thermeosynechococcus vulcanus*
T. elongatus	*Thermeosynechococcus elongatus*
S_i	S-state i of Mn-Ca-cluster
TMH	transmembrane α-helix
SAS	single-wavelength anomalous scattering
β-DM	n-dodecyl-*β*-D-maltoside
XANEX	X-ray absorption near edge structure spectroscopy