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Transient interactions between photosynthetic proteins

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Transient interactions between photosynthetic proteins

Proefschrift

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Rinske Hulsker

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Voor mijn moeder,

Aan Georg

Cover image: The cover image was kindly provided by Melitta Tchaicovsky (www.artnetwork.com). The Sand Mandala was constructed by Buddhist monks at the Palace of the Governor in Santa Fe, New Mexico in 2002, as part of a fund raising effort to support the continuation of the Gaden Shartse Monastery in Katmandu and the Drepung Loseling Monastery in India. During the closing ceremony, the monks dismantle the Mandala, sweeping up the coloured sands to symbolize the impermanence of all that exists.

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2008, Rinske Hulsker

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Abbreviations

Amp	ampicillin
ATP	adenosine 5'-triphosphate
cyt c_6	cytochrome c_6
cyt f	cytochrome f
$\Delta\delta_{\text{avg}}$	average chemical shift perturbation
$\Delta\delta_{\text{bind}}$	chemical shift perturbation caused by complex formation
$\Delta\delta_{\text{max}}$	fitted maximum of $\Delta\delta_{\text{bind}}$
HSQC	heteronuclear single quantum coherence
IPTG	isopropyl- β -D-thiogalactopyranoside
K_a	association constant
K_d	dissociation constant
k_{off}	dissociation rate constant
k_{on}	association rate constant
LB	Luria – Bertani broth
MTS	(1-acetyl-2,2,5,5-tetramethyl-3-pyrroline-3-methyl)-methanethiosulfonate
MTSL	(1-oxyl-2,2,5,5-tetramethyl-3-pyrroline-3-methyl)-methanethiosulfonate
NOESY	nuclear Overhauser enhancement spectroscopy
NMR	nuclear magnetic resonance
Pc	plastocyanin
PCd	cadmium-substituted plastocyanin
PCu	cuprous plastocyanin (oxidation state in Roman numerals)
PCS	pseudocontact shift
PMSF	phenylmethanesulphonyl fluoride
PRE	paramagnetic relaxation enhancement
PSI	photosystem I
PSII	photosystem II
rmsd	root mean square deviation
TOCSY	total correlation spectroscopy
wt	wild type