Bridging the gap between natural & artificial light-harvesting : a structure-function investigation with MAS NMR
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	Prof. dr. J. Lugtenburg
	Prof. dr. J. Brouwer

For my parents

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Abbreviations

[E,E]	[8-ethyl, 12-ethyl]
[E,M]	[8-ethyl, 12-methyl]
[M,M]	[8-methyl, 12-methyl]
[Pr,E]	[8-propyl, 12-ethyl]
1D	one-dimensional
2D	two-dimensional
AFM	atomic force microscopy
BChl	bacteriochlorophyll
bchQR	*bchQ bchR*
bchQRU	*bchQ bchR bchU*
BLYP	Becke, Lee, Yang and Parr
C.	*Chlorobium*
Cf.	*Chloroflexus*
Chl	chlorophyll
COSY	correlation spectroscopy
CP	cross-polarization
DARR	dipolar-assisted rotational resonance
DFT	density functional theory
EM	electron microscopy
FMO	Fenna-Matthew-Olson
FSLG	frequency-switched Lee-Goldburg
GIAO	Gauge-Independent Atomic Orbital
HETCOR	heteronuclear correlation
HOPG	highly ordered pyrolytic graphite
HRMS	high resolution mass spectrometry
LH1	light-harvesting complex 1
LH2	light-harvesting complex 2
MAS	magic angle spinning
NICS	nucleus-independent chemical shift
NMR	nuclear magnetic resonance
NSD	normal-coordinate structural decomposition
OD	optical density
PDB	protein data bank
PDSD	proton driven spin diffusion
PMLG	phase-modulated Lee-Goldburg
ppm	parts per million
RC	reaction center

Abbreviations

rf	radio frequency
RFDR	radio frequency-driven dipolar recoupling
Rps.	*Rhodopseudomonas*
S/N	signal-to-noise
STM	scanning tunneling microscopy
THF	tetrahydrofuran
TPPM	two pulse-phase modulation
*w*PMLG	windowed phase-modulated Lee-Goldburg
WT	wild-type

Amino acid abbreviations

A	Alanine
R	Arginine
N	Asparagine
D	Aspartic acid (Aspartate)
C	Cysteine
Q	Glutamine
E	Glutamic acid (Glutamate)
G	Glycine
H	Histidine
I	Isoleucine
L	Leucine
K	Lysine
M	Methionine
F	Phenylalanine
P	Proline
S	Serine
T	Threonine
W	Tryptophan
Y	Tyrosine
V	Valine