1a. Personal details

- Title:	Dr.
- First name:	John
- Initials:	J.T.M.
- Surname:	Kennis
- Male/female:	male
- Address for correspondence	Biophysics Section Department of Physics and Astronomy Faculty of Sciences Vrije Universiteit De Boelelaan 1081 1081HV Amsterdam, The Netherlands
- Telephone:	020 5987212
- Cell phone	06-21551064
- Fax:	020 5987999
- Email:	j.t.m.kennis@vu.nl
- Website:	www.nat.vu.nl/~john

Curriculum vitae

4a. Personal details

Title(s), initial(s), first name, surname:	Dr. J.T.M. (John) Kennis
Gender: male/female	male
Date and place of birth:	June 1 1968, Vessem
Nationality:	Dutch

4b. Master's ('Doctoraal')

University/College of Higher Education:	University of Amsterdam
Date (dd/mm/yy):	31/08/1992
Studies:	Physics
Main subject:	Laser physics and solid-state physics

4c. Doctorate

University/College of Higher Education:	Leiden University
Starting date (dd/mm/yy):	01/10/1992
Completion date (dd/mm/yy):	17/09/1997, *cum laude*
Supervisor ('promotor'):	Jan Amesz & Thijs Aartsma
Title of thesis:	Exciton coupling, energy transfer and photochemical conversion in purple photosynthetic bacteria

4d. Current employment

- Type of contract:

Current position	Fixed term	Permanent
Assistant professor (UD)		
Associate professor (UHD)		x
Full professor (HGL)		
Other, please specify:		

Honors

1. Cum laude distinction to Ph.D. degree (1997). (rarely given in The Netherlands, typically to top 10% of candidates)

2. Human Frontier Science Program Long-term fellow 1998-2000, University of California at Berkeley, 70k$.

3. NWO-VIDI fellow 2004 – 2009, 600 k€. A VIDI fellowship is a highly competitive award given to young scientists to set up their own research line. It is typically a way to obtain a tenure-track position at a Dutch university

4. NWO-VICI fellow 2012, 1.5 M€. A VICI fellowship is a highly competitive award given to young researchers with an established track record. It typically sets the fellow on a path to full professorship at a Dutch university.

5. Lecturer of the Morino Foundation for the Promotion of Molecular Sciences (Japan) 2012, 10 k€.

4e. Work experience since graduating
Specify per appointment: number of fte, tenured term ('vast') / fixed-term ('tijdelijk', and supervisory responsibilities (if any).

2012 VICI laureate.

2010 – present: Associate Professor (UHD), Physics Department, Vrije Universiteit
1fte, permanent position. Supervision of 3 PhD students, 1 postdoc, 1 MSc student, 1 BSc student and 1 technician.

2007 – 2010: Assistant Professor (UD), Physics Department, Vrije Universiteit
1fte, permanent position. Supervision of 6 PhD students and 1 technician.

2004 – 2009: VIDI Laureate, Physics Department, Vrije Universiteit
1 fte, fixed term to 2007. Supervision of 5 PhD students, 1 postdoc and 1 technician.

2000- 2003: Postdoc, Biophysics Group, Vrije Universiteit,
1 fte, fixed term. Partial supervision of 3 PhD students

1998 – 2000: Postdoc, Chemistry Department, University of California at Berkeley,
1fte, fixed term. Partial supervision of one PhD student.

4g. Brief summary of research over last five years
(max. 450 words)

My research involves on the physico-chemical mechanisms of reception, storage and processing of photic energy and information in biology and biomimetic systems. To this end, I employ and further develop advanced time-resolved spectroscopic techniques such as transient absorption, time-resolved IR, stimulated Raman and multi-pulse spectroscopy.

I have developed a research program to understand the dynamic-structural basis of signal transduction at the molecular level, from initiation by a flash of light to propagation of information-encoding structural changes in the signaling proteins. I have focused on newly discovered photoreceptor proteins with a high potential for practical applications. An important objective is to arrive at a dynamic structural-mechanistic view of photoreceptor activation that can be utilized in developing artificial biophotonic switches and sensors, to be used in cell biology, neuroscience and tissue imaging. Highlights include Gauden et al., PNAS 2006; Bonetti et al., Biophys. J. 2008; Alexandre et al., Biophys. J. 2009; Toh et al. PNAS 2010.

A major research line involves regulatory phenomena in photosynthetic light harvesting. To

this end, I investigate natural and artificial light-harvesting and photoprotective systems, by which carotenoids and Chl or Chl mimics, or electron acceptors such as fullerenes, are covalently or noncovalently linked in well-defined geometries. In essence, the scientific questions condense to a molecular understanding of controlled energy and electron transfer flows in confined geometries of tetrapyrroles and carotenoids, and the role played by symmetry-forbidden excited states and intra- and intermolecular charge-transfer states. Highlights include Berera et al., PNAS 2006; Ruban et al., Nature 2007 Wilson et al., PNAS 2008; Kloz et al, JACS 2011.

I participate in the Artificial Leaf research programme of national BioSolar Cells (BSC) programma, which aims at the construction of an artificial photosynthetic device for solar fuel device. I aim to functionally characterize artificial photosynthetic modules by means of advanced time-resolved spectroscopic techniques. Detailed knowledge about the pathways and (loss) mechanisms of energy and charge transfer allows for a design steering feedback loop with organic chemistry and supramolecular catalysis groups to optimize the performance of artificial photosynthetic modules and their joint action in integrated devices.

To ensure a broad, multidisciplinary approach to the key biological and biophysical questions of the photoactive systems of interest, I have set up and cultivated a wide network of contacts and collaborations with molecular biologists, microbiologists, biochemists, organic chemists, structural biologists, theoreticians and other biophysicists.

4h. International activities

Postdoc in USA
1998 – 2000, Department of Chemistry, University of California at Berkeley on a HFSP long-term fellowship. PIs Graham Fleming and Richard Mathies

Prolonged international visit
Oct-Dec 2002, visit to Department of Chemistry, University of California at Berkeley on a HFSP short-term fellowship

International collaborations
Peter Hegemann, Humboldt University Berlin
Keith Moffat, University of Chicago
Andreas Möglich, Humboldt University Berlin (former postdoc of Moffat, now junior professor in Hegemann's department in Berlin)
Wolfgang Gärtner, MPI Mulheim
Mattias Mack, FH Mannheim
Thomas Moore, Ana Moore, Devens Gust, Arizona State University
Sean Crosson, University of Chicago
Robert Bittl, Free University Berlin
Diana Kirilovsky, CEA Saclay
Tatiana Domratcheva, MPI Heidelberg
Alexander Ruban, Queen Mary University London
Harry A. Frank, University of Connecticut

International grants
DFG-NWO 'Cooperation Germany' grant, with Hegemann (Berlin)
FP7 Initial Training Network 'Harvest' granted 2009, co-applicant

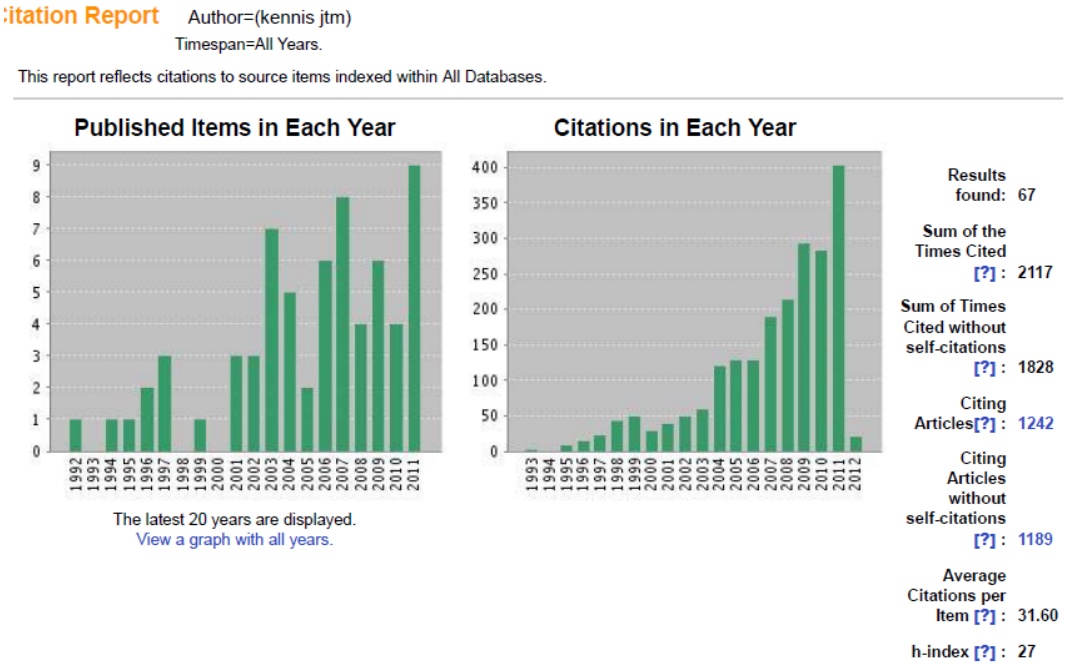
Participation in German Research Clusters
2005-2011: partner of DFG Forschergruppe FOR526 'Blue light photoreceptors'
2011 – present: Partner of Berlin Cluster of Excellence 'Unifying concepts of Catalysis'

4j. Grants, scholarships and prizes

15. Lectureship of the Morino Foundation for the Promotion of Molecular Sciences (Japan) 2012, 10 k€.
14. NWO VICI grant,'Shedding light on the Optogenetics Toolbox', 1.5 M€
13. NWO Chemical Sciences (NWO-CW) 'Middelgroot' investment grant 2011, "From sunlight to fuel: a versatile all-timescale spectrophotometer to assess solar energy conversion in artificial photosynthetic devices." 308 k€ (excl. matching)
12. Towards BioSolar Cells (TBSC) core programme 2010 'Functional assessment and characterization of artificial photosynthetic systems with time-resolved spectroscopy and spectroelectrochemistry', 290 k€.
11. NWO-CW ECHO 2010, 'Illuminating Biophotonic Switches', 260 k€
10. EU FP7 Harvest network 2009, 'Ultrafast spectroscopy of quenched PSII antennas', Kennis/Van Grondelle/Dekker, 230 k€.
9. NWO-CW ECHO grant 2006, 'Molecular mechanisms of regulated light-harvesting', Kennis/Van Grondelle, 220 k€. Project conceived and written by JK.
8. NWO-ALW 'Middelgroot' Investment fund 2005, 'An ultrafast multi-pulse control spectrometer to disentangle complex reactions in biology': Kennis/Van Grondelle, 504 k€. (excl. matching) Project conceived and written by JK.
7. NWO-ALW VIDI award 2003, 'Biological sensing: a dynamical structural view', 600 k€.
6. NWO-ALW 'Molecule to Cell' Programme 2002, 'Time flies: Molecular understanding of the functioning of a new type of photoreceptor protein in *Bacillus subtilis* from initiation to organismal response.'Kennis/Van Grondelle/Hellingwerf, 500 k€. The VU part (1 PhD + 1 postdoc) conceived and written by JK.
5. NWO-ALW Open Competition 2002, 'Dynamical structures of carotenoids: the role of low-lying electronic states in light harvesting, photoprotection and regulation of photosynthesis' Kennis/van Grondelle, 240 k€. Project conceived and written by JK.
4. Various LaserLab Europe Access grants to my collaborators Kodis (Vilnius), Hegemann (Berlin), Klug (Giessen), Ruban (Sheffield/London), Bittl (Berlin), Mathes (Berlin). This type of grants directly results in cash for the VU-Physics department, totaling 100 k€.
3. Human Frontier Science Program Organisation (HFSP), 2001 Short-term fellowship, 10 k$ for a 3-month visit to the University of California, Berkeley
2. Human Frontier Science Program Organisation (HFSP), 1998 Long-term fellowship award, 80 k$ for a postdoctoral position at the University of California, Berkeley.
1. TALENT stipendium by NWO, 1998, 30 k$. Declined because I obtained HFSP grant at the same time.

List of publications

5a. Publications



Shown above a ISI Web of Science search on 'Kennis JTM' on February 6 2012.
67 results
2117 citations
h-index 27

- **International (refereed) journals**

63 peer-reviewed articles: 25 last author, 15 first author, 36 corresponding author

63. T. Mathes, J. Zhu, I.H.M. van Stokkum, M.L. Groot, P. Hegemann, J.T.M. Kennis **J. Phys. Chem. Lett.** (2012) 3, 203-208 Hydrogen bond switching among flavin and amino acids determines the nature of proton-coupled electron transfer in BLUF photoreceptors
62. P.N. Liao, S. Pillai, D. Gust, M. Kloz, A.L. Moore, T.A. Moore, J.T.M. Kennis, R. van Grondelle, P.J. Walla **Photosynth. Res**. (2011*) in press* On the role of excitonic interactions in carotenoid-phthalocyanine dyads and implication in photosynthetic regulation
61. M. Kloz, R. van Grondelle, J.T.M. Kennis **Phys Chem Chem Phys** (2011) 13, 18123-18133 Wavelength-modulated femtosecond stimulated Raman spectroscopy – approach towards automatic data processing
60. M. Di Donato, L.J.G.W. van Wilderen, I.H.M. Van Stokkum, T.A. Cohen Stuart, J.T.M. Kennis, K.J. Hellingwerf, R. van Grondelle, M.L. Groot **Phys Chem Chem Phys** (2011) *13,* 16295-16305 Proton transfer events in GFP
59. A. Gall, R. Berera, M.T.A. Alexandre, A.A Pascal, L. Bordes, M.M. Mendes-Pinto, S. Andrianambinintsoa, K.V. Stoitchkova, A. Marin, L. Valkunas, P. Horton, J.T.M. Kennis, R. van Grondelle, A. Ruban, B. Robert **Biophys. J.** 101 (2011) 934-942 Molecular adaptation of

photoprotection: triplet states in light-harvesting proteins

58. T. Mathes, I.H. M. van Stokkum, C. Bonetti, P. Hegemann, J.T.M. Kennis **J Phys Chem B** 115 (2011) 7963-7971. The hydrogen-bond switch reaction of the BlrB BLUF domain of *Rhodobacter sphaeroides*
57. K.C. Toh, E. Stojkovic, I.H.M. van Stokkum, K. Moffat, J.T.M. Kennis **Phys Chem Chem Phys**, 13 (2011) 11985-11997 Fluorescence quantum yield and photochemistry of bacteriophytochrome constructs
56. A.M. Rupenyan, J. Vreede, van Stokkum, I.H.M., M. Hospes, J.T.M. Kennis, K.J. Hellingwerf, M.-L. Groot, **J Phys Chem B** 115 (2011) 6668-6677 Proline 68 tunes photochemistry yield in Photoactive Yellow Protein
55. M. Kloz, S. Pillai, G. Kodis, D. Gust, T.A. Moore, A. L. Moore, R. van Grondelle, J.T.M. Kennis **J Am Chem Soc** 133 (2011) 7007-7015 Carotenoid photoprotection in artificial photosynthetic antennas
54. K.C. Toh, E. Stojkovic, A.Rupenyan, I.H.M. van Stokkum, M.L. Groot, K. Moffat, J.T.M. Kennis **J. Phys Chem A**, 115 (2011) 3778-3786. Invited paper for the Graham Fleming Festschrift. Primary photochemistry of bacteriophytochrome observed with ultrafast mid-IR spectroscopy
53. I.H.M. van Stokkum, M. Gauden, S. Crosson, R. van Grondelle, K. Moffat, J.T.M. Kennis **Photochem Photobiol** 87 (2011) 534-541 The primary photophysics of the *Avena sativa* phototropin 1 LOV2 domain observed with time-resolved emission spectroscopy
52. K.C. Toh, E. Stojkovic, I.H.M. van Stokkum, K. Moffat, J.T.M. Kennis **Proc Natl Acad Sci USA** 107 (2010) 9170 – 9175 Proton transfer and hydrogen bond interactions determine fluorescence quantum yield and photochemical efficiency of bacteriophytochrome
51. C. Bonetti, M.T.A. Alexandre, I.H.M. van Stokkum, R. Hiller, R. van Grondelle, M.L. Groot, J.T.M. Kennis **Phys Chem Chem Phys**, 12, (2010), 9256-9266 Identification of excited-state energy transfer and relaxation pathways in the peridinin-chlorophyll complex: an ultrafast mid-infrared study
50. M.T.A. Alexandre, E.B. Purcell, R. van Grondelle, B. Robert, J.T.M. Kennis, S. Crosson **Biochemistry** *49, (2010),* 4752-4759 Spectroscopic determination of electronic and protein structural dynamics in a photosensory LOV histidine kinase
49. R. Berera, I.H.M. van Stokkum, J.T.M. Kennis, R. van Grondelle, J.P. Dekker **Chem Phys** 372 (2010), 65-70 The light-harvesting function of carotenoids in the cyanobacterial stress-inducible IsiA complex
48. Bonetti, C., Stierl, M., Mathes, T., et al., Van Stokkum, I.H.M., Mullen, K.M., Cohen-Stuart, T.A., Van Grondelle, R., Hegemann, P., J.T.M. Kennis. **Biochemistry**, 48 (2009) 11458-11469 The Role of Key Amino Acids in the Photoactivation Pathway of the *Synechocystis* Slr1694 BLUF Domain
47. Alexandre, M.T.A., Domratcheva, T., Bonetti, C., Wilderen, L.J.G.W. van, Grondelle R. van, Groot M.L., Hellingwerf K.J., J.T.M. Kennis **Biophys J** 97 (2009) 227-237 Primary Reactions of the LOV2 Domain of Phototropin Studied with Ultrafast Mid-infrared Spectroscopy and Quantum Chemistry
46. Alexandre M.T.A, Grondelle, R. van, Hellingwerf K.J., J.T.M. Kennis **Biophys J** 97 (2009) 238-247. Conformational Heterogeneity and Propagation of Structural Changes in the LOV2/J alpha Domain from *Avena sativa* Phototropin 1 as Recorded by Temperature-Dependent FTIR Spectroscopy
45. Berera, R., Grondelle, R. van, and J.T.M. Kennis **Photosynth Res** 101 (2009) 105-118. Ultrafast transient absorption spectroscopy: principles and application to photosynthetic systems.
44. Berera R., Stokkum I.H.M. van, d'Haene S., J.T.M. Kennis, Grondelle, R. van, Dekker, J.P. **Biophys J** 96 (2009) 2261-2267. A Mechanism of Energy Dissipation in Cyanobacteria
42. Bonetti, C., Alexandre, M.T.A., Hiller, R.G., J.T.M. Kennis., Grondelle, R. van **Chem Phys**, 357, 2009, p. 63-69. Chl-a triplet quenching by peridinin in H-PCP and organic solvent revealed by step-scan FTIR time-resolved spectroscopy
42. A. Wilson, C. Punginelli, A. Gall, C. Bonetti, M. Alexandre, J.-M. Routaboul., C. A. Kerfeld, R. van Grondelle, B. Robert, J.T.M. Kennis, D. Kirilovsky **Proc Natl Acad Sci USA** 105 (2008) 12075-12080

A photoactive carotenoid protein acting as light intensity sensor

41. C. Bonetti, T. Mathes, I.H.M. van Stokkum, K.M. Mullen, M.L. Groot, R. van Grondelle, P. Hegemann, J.T.M. Kennis **Biophys J** 95 (2008) 4790 - 4802 Hydrogen bond switching among flavin and amino acid side chains in the BLUF photoreceptor observed by ultrafast infrared spectroscopy
40. M.T.A. Alexandre, R. van Grondelle, K.J. Hellingwerf, B. Robert, J.T.M. Kennis **Phys Chem Chem Phys** 10 (2008) 6693-6702 Perturbation of the ground-state electronic structure of FMN by the conserved cysteine in phototropin LOV2 domains
39. K.C. Toh, I.H.M. van Stokkum, J.C. Hendriks, M.T.A. Alexandre, J.C. Arents, M. Avila-Perez, R. van Grondelle, K.J. Hellingwerf, J.T.M. Kennis **Biophys J** 95 (2008) 312-321 On the signaling mechanism and the absence of photoreversibility in the AppA BLUF domain
38. A.V. Ruban, R. Berera, C. Ilioaia, I.H.M. van Stokkum, J.T.M. Kennis, A.A. Pascal, H. van Amerongen, B. Robert, P. Horton, R. van Grondelle **Nature** 450, 2007, p. 575-579 Identification of a mechanism of photoprotective energy dissipation in higher plants
37. J.T.M. Kennis and S. Crosson **Science** 317 (2007) 1041-1042 A bacterial pathogen sees the light (Perspective, invited)
36. J.T.M. Kennis and M.L. Groot **Current Opinion in Structural Biology** 17, 2007, 623-630 Ultrafast spectroscopy of biological photoreceptors (invited)
35. M. Gauden, J.S. Grinstead, W. Laan, I.H.M. van Stokkum, M.Avila-Perez, K.C. Toh, R. Boelens, R. Kaptein, R. van Grondelle, K.J. Hellingwerf, J.T.M. Kennis **Biochemistry** 46 (2007) 7405-7415 On the role of aromatic side chains in the photoactivation of BLUF domains
34. R. Berera, G. Kodis, A. Keirstead, S. Pillai, C. Herrero, R.E. Palacios, I.H. M. van Stokkum, R. van Grondelle, D. Gust, T.A. Moore, A.L. Moore, J.T.M. Kennis **J Phys Chem B** 111 (2007) 6868-6877 Energy transfer, excited-state deactivation and exciplex formation in artificial caroteno-phthalocyanine light harvesting dyads
33. M.T.A. Alexandre, J.C. Arents, R. van Grondelle, K.J. Hellingwerf, J.T.M. Kennis **Biochemistry** 46 (2007) 3129-3137 A base-catalyzed mechanism for dark state recovery in the *Avena sativa* phototropin-1 LOV2 domain.
32. M.T.A. Alexandre, D.C. Luhrs, I.H.M. van Stokkum, R. Hiller, M.L. Groot, J.T.M. Kennis**,** R. van Grondelle **Biophys J** 93, 2007, p. 2118-2128 Triplet state dynamics in peridinin–chlorophyll a–protein: A new pathway of photo-protection in LHCs?
31. R. Berera, C. Herrero, I.H.M. van Stokkum, M. Vengris, G. Kodis, R.E. Palacios, H. van Amerongen, R. van Grondelle, D. Gust, T.A. Moore, A.L. Moore**,** J.T.M. Kennis **Proc Natl Acad Sci USA** 103 (2006) 5343-5348 A simple artificial light-harvesting dyad as a model for excess energy dissipation in oxygenic photosynthesis
30. M. Gauden, I.H.M. van Stokkum, J.M. Key, D. Ch. Luhrs, R. van Grondelle, P. Hegemann, J.T.M. Kennis **Proc Natl Acad Sci USA** 103 (2006) 10895-10900 Hydrogen bond switching via a radical pair mechanism in a flavin-binding photoreceptor
29. R. Berera, G.F. Moore, I. H.M. van Stokkum, G. Kodis, M. Gervaldo, R. van Grondelle, J.T. M. Kennis, D. Gust, T.A. Moore, A.L. Moore **Photochem Photobiol Sci** 2006, 5, p. 1152-1149 Charge separation and energy transfer in a caroteno–C60 dyad: photoinduced electron transfer from the carotenoid excited states
28. Palacios, R. E.; Kodis, G.; Herrero, C.; Ochoa, E. M.; Gervaldo, M.; Gould, S. L.; J.T.M. Kennis; Gust, D.; Moore, T. A.; Moore, A. L. **J Phys Chem B** 2006, 110, 25411-25420. Tetrapyrrole Singlet Excited State Quenching by Carotenoids in an Artificial Photosynthetic Antenna
27. I.H.M. van Stokkum, B. Gobets, T. Gensch, F. van Mourik, K.J. Hellingwerf, R. van Grondelle, J.T.M. Kennis **Photochem. Photobiol**., 2006, 82, p. 380-388 (Sub)-picosecond spectral evolution of fluorescence in photoactive proteins studied with a Synchroscan streak camera system 26. W. Laan, M. Gauden, S. Yeremenko, R. van Grondelle, J.T.M. Kennis, K.J. Hellingwerf **Biochemistry** 45, 2006, p. 51-60 On the mechanism of activation of the BLUF domain of AppA
25. M. Gauden, S. Yeremenko, W. Laan, I.H.M. van Stokkum, J.A. Ihalainen, R. van Grondelle, K.J. Hellingwerf, J.T.M. Kennis **Biochemistry** 44, 2005, p. 3653-3662 Photocycle of the flavin-binding

photoreceptor AppA, a bacterial transcriptional anti-repressor of photosynthesis genes

24. R.E. Palacios, S.L. Gould, C. Herrero, M. Hambourger, A. Brune, G. Kodis, P.A. Liddell, J.T.M. Kennis, A.N. Macpherson, D. Gust, T.A. Moore, A.L. Moore **Pure Appl Chem** 77, 2005, p. 1001-1008 Bioinspired energy conversion
23. J.T.M. Kennis, D.S. Larsen, I.H.M. van Stokkum, M. Vengris, J.J. van Thor, R. van Grondelle **Proc Natl Acad Sci USA** 101, 2004, p. 17988-17993 Uncovering the hidden ground state of green fluorescent protein
22. J.T.M. Kennis, I.H.M. van Stokkum, S. Crosson, M. Gauden, K. Moffat, R. van Grondelle **J Am Chem Soc** 126, 2004, p. 4512-4513 The LOV2 domain of phototropin: A reversible photochromic switch
21. G. Kodis, C. Herrero, R. Palacios, E. Mariño-Ochoa, S. Gould, L. de la Garza, R. van Grondelle, D. Gust, T.A. Moore, A.L. Moore, J.T.M. Kennis **J Phys Chem B** 108, 2004, p. 414-425 Light harvesting and photoprotective functions of carotenoids in compact artificial photosynthetic antenna designs
20. N.E. Holt, J.T.M. Kennis, G.R. Fleming **J Phys Chem B** 108, 2004, p. 19029-19035 Femtosecond fluorescence upconversion studies of light harvesting by β-carotene in oxygenic photosynthetic core proteins
19. J.T.M. Kennis, S. Crosson, M. Gauden, I.H.M. van Stokkum, K. Moffat, R. van Grondelle Primary reactions of the LOV2 domain of phototropin, a plant blue-light photoreceptor **Biochemistry** 42, 2003, p. 3385-3392
18. E. Papagiannakis, S.K. Das, A. Gall, I.H.M. van Stokkum, B. Robert, R. van Grondelle, H.A. Frank, J.T.M. Kennis **J Phys Chem B** 107, 2003, p. 5642-5649 Light harvesting by carotenoids incorporated into the B850 light-harvesting complex from *Rhodobacter sphaeroides* R-26.1: Excited-state relaxation, ultrafast triplet formation and energy transfer to bacteriochlorophyll
17. N.E. Holt, J.T.M. Kennis**,** L. Dall'Osto, R. Bassi, G.R. Fleming **Chem Phys Lett** 379, 2003, p. 305-313 Carotenoid to chlorophyll energy transfer in light harvesting complex II from Arabidopsis thaliana probed by femtosecond fluorescence upconversion
16. D.S. Larsen, E. Papagiannakis, I.H.M. van Stokkum, M. Vengris, J.T.M. Kennis, R. van Grondelle **Chem Phys Lett** 381, 2003, p. 733-742 Excited state dynamics of β-carotene explored with dispersed multi-pulse transient absorption
15. F.L. de Weerd, J.T.M. Kennis**,** J.P. Dekker, R. van Grondelle **J. Phys. Chem. B** 107, 2003, p. 5995-6002 β-Carotene to chlorophyll singlet energy transfer in the photosystem I core of *Synechococcus elongatus* proceeds via the β-carotene S_2 and S_1 states
14. E. Papagiannakis*, J.T.M. Kennis*****, I.H.M. van Stokkum, R.J. Cogdell, R. van Grondelle **Proc Natl Acad Sci USA** 99, 2002, p. 6017-6022 An alternative carotenoid-to-bacteriochlorophyll energy transfer pathway in photosynthetic light harvesting *shared first author
13. J.T.M. Kennis, D.S. Larsen, K. Ohta, M.T. Facciotti, R.M. Glaeser, G.R. Fleming **J Phys Chem B** 106, 2002, p. 6067-6080 Ultrafast Protein Dynamics of Bacteriorhodopsin Probed by Photon Echo and Transient Absorption Spectroscopy
12. C.C. Gradinaru*, J.T.M. Kennis*****, E. Papagiannakis, I.H.M. van Stokkum, R.J. Cogdell, G.R. Fleming, R.A. Niederman, R. van Grondelle **Proc Natl Acad Sci USA** 98, 2001, p. 2364-2369 An unusual pathway of excitation energy deactivation in carotenoids: Singlet-to-triplet conversion on an ultrafast timescale in a photosynthetic antenna *shared first author
11. J.T.M. Kennis, B. Gobets, I.H.M. van Stokkum, J.P. Dekker, R. van Grondelle, G.R. Fleming **J Phys Chem B** 105, 2001, p. 4485-4494 Light harvesting by chlorophylls and carotenoids in the photosystem I core complex of *Synechococcus elongatus*. A fluorescence upconversion study
10. B. Gobets, J.T.M. Kennis, J.A. Ihalainen, M. Brazzoli, R. Croce, I.H.M. van Stokkum, R. Bassi, J.P. Dekker, H. van Amerongen, G.R. Fleming, R. van Grondelle **J Phys Chem B** 105, 2001. 10132-10139 Excitation energy transfer in dimeric light-harvesting complex I: a combined streak-camera/fluorescence upconversion study
9. S.I.E. Vulto, J.T.M. Kennis, A.M. Streltsov, J. Amesz, T.J. Aartsma **J Phys Chem B** 103, 1999, 878-883 Energy relaxation within the B850 absorption band of the isolated light-harvesting complex LH2

from Rhodopseudomonas acidophila at low temperature

8. J.T.M. Kennis, Shkuropatov AY, van Stokkum IHM, Gast P, Hoff AJ, Shuvalov VA, Aartsma TJ **Biochemistry** 36, 1997, 16231-16238 Formation of a long-lived P(+)B(A)(-)state in plant pheophytin-exchanged reaction centers of Rhodobacter sphaeroides R26 at low temperature
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