

ABA LOSI Curriculum vitae
[scientific \(I\)](#), [educational activities \(II\)](#), [publications](#)

Date and place of birth: 16.04.1961, Parma, Italy

Associate professor SSD-FIS/07 (UNIPR); at the Dept. of Mathematical, Physical and Computer Sciences <http://www.unipr.it/ugov/person/20683>;

<https://orcid.org/0000-0003-0497-2723>

H-index = 29 (Scopus)



I. SCIENTIFIC ACTIVITIES

I.1. ACADEMICS

a. Degree in biology: 06.3.1992, UNIPR.

b. Professional qualification in Biology: 1993

c. PhD in Biophysics, UNIPR 31.01.1997

d. National Scientific Qualifications as Associate Professor: 1. 02/B3: Applied Physics; 2. 05/E1 General Biochemistry and Clinical Biochemistry

e. 1.11.2002-30.9.2014: Assistant professor in Applied Physics, University of Parma, Italy (UNIPR).

f. 01.10.2014-present Associate professor in Applied Physics, University of Parma, Italy (UNIPR)

I.2. POST-DEGREE AND POST-DOC FELLOWSHIPS

a. 01.04.1996 - 30.04.1997 CNR Post-Degree fellowship , Dept. Physics, UNIPR;

b. 12.11.1997-11.11.1998 Post-Doc Marie Curie grant, at MPI for Radiation Chemistry, Mülheim Ruhr, GER;

c. 01.01.2000-30.11.2000 NATO-CNR fellowship at MPI for Radiation Chemistry, Mülheim Ruhr, GER; **d.** 02.07.1999-02.07.2001 Post doc, Dept. Physics, UNIPR

I.3. CONTRACTS

a. 13.11.1998-12.06.1999 MPI for Radiation Chemistry, Mülheim Ruhr, GER.

b. 01.09.2001-31.10.2001 University of Regensburg, GER.

c. 01.10.2001-30.06.2002 MPI for Radiation Chemistry, Mülheim Ruhr, GER

d. 01.07.2002-31.12.2002 MPI for Biochemistry, Martinsried, GER.

I.4. AFFILIATIONS

European Society for Photobiology (ESP); Società Italiana di Fotobiologia (SIFB); Società Italiana di Biofisica Pura e Applicata (SIBPA)

I.5. INVITED LECTURES

40 in international meetings

I.6. PUBLICATIONS

78 publications on international peer-reviewed journals; 8 book-chapters.

H-index = 29 (Scopus)

<http://orcid.org/0000-0003-0497-2723>

I.7. RESEARCH ACTIVITY

Novel photosensors for visible-light: structure, function, energetics, evolution and advanced biophysical applications

I.8. OTHER ACTIVITIES

a. Convenor of the workshop ESF-EW03-054: *Flavin-based sensorial photoreceptors: from bacteria to plants*, Parma, Italia, 25-27.3.04.

b. Member of scientific boards in the following international meetings: **i.** XI Congr. ESP (European Society for Photobiology) Aix-les-Bains 2005; **ii.** XII Congr. ESP Bath 2007; **iii.** 34th ASP (American Society for

Photobiology) meeting, Burlingame, CA, 2008; **iv.** XIII ESP Wroclaw 2009; **v.** XIV ESP, Geneve 2011; **vi.** Gordon Conference on Photosensory Receptors & Signal Transduction, Lucca, 2010; **vii.** Gordon Conference on Photosensory Receptors & Signal Transduction, Lucca, 2014; **viii.** 16th International Congress on Photobiology, Córdoba, ARG, 2014; **ix.** Gordon Conference on Photosensory Receptors & Signal Transduction, Galveston TX, 2016; **x:** World Congress on Light and Life (17th Congress of the International Union of Photobiology and 18th Congress of the European Society for Photobiology), Barcelona (Spain) 25-30. 08. 2019; 19th Congress of the European Society for Photobiology), Salzburg (Austria) 30.08-03.09.2021
c. Associated editor to Photochemical and Photobiological Sciences, Royal Society of Chemistry, Londra (2006-present)
d. Visiting scientist at MPI for Chemical Energy Conversion, MH,GER (2005-2015)
e. 03.2014-04.2018 responsible for orientation and divulgation for Physics degrees at UNIPR
f. Referee for H2020-FETOPEN-RIA-2014-2015, contract CT-EX2015D244897-101; referee for ANVUR_VQR 2011-2014; referee for the French National Research Agency (ANR), 2018.

I.9 FINANCED PROJECTS

a. (DFG)- Forschergruppe FOR 526: Blue-light Sensitive Photoreceptors, 2004-2010. **Role:** Guest Scientist
b. Vigoni programme 2011, **running: 2012-2013**, project: "*Fine-tuning of the photobiophysics of photoreceptor proteins for applications in high resolution fluorescence microscopy and optogenetics*". **Role:** Coordinator
c. PRIN 2010-2011: *L'equilibrio tra eccitazione ed inibizione nel sistema nervoso centrale: trasmissione sinaptica, plasticità e sinaptopatie* running: **01.02.2013-01.02.2016**; **Role:** Participant

I.10. COLLABORATIONS

Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, GER
Forschungszentrum Jülich GmbH, GER
Istituto Italiano di Tecnologia, Genova, ITA
Università degli Studi di Genova, ITA
University of Würzburg, GER
Humboldt Universität zu Berlin, GER
Freie Universität Berlin, Berlin, GER
Universidad Nacional de Rosario, Rosario, ARG
Huazhong Agricultural University, WUHAN CHN
Aarhus University, Denmark
University of Leipzig, Germany

I.11. AWARDS

2014: Photocite-B award for the most cited review on Photochemistry and Photobiology during 2010-2013; conferred for: A. Losi, A. and W. Gaertner, Old chromophores, new photoactivation paradigms, trendy applications: flavins in LOV and BLUF Photoreceptors, Photochem. Photobiol., 2011, 87, 491-510.

II. TEACHING AND EDUCATIONAL ACTIVITY

II. 1 COURSE ASSIGNMENTS at UNIPR (Università di Parma, Italy)

AY. 2004/2005: Photobiology (4 credits); Master degree in Physics of Biosystems
AY. 2007/2008: Physics (7 credits); Bachelor degree in Biology
AY. 2008/2009: Physics (7 credits); Bachelor degree in Biology
AY. 2009/2010: **a.** Physics (9 credits); Bachelor degree in Biology
b. Introduction to Biophysics (9 credits); Master degree in Physics
AY 2011/2012: Introduction to Biophysics (9 credits); Master degree in Physics
AY 2012/2013: Biophysics (6 credits) Master degree in Physics
AY 2013/2014: Biophysics (6 credits) Master degree in Physics
AY 2014/2015-present:
a. Photobiophysics and Photobiology (6 credits) Master degree in Physics

- b. Physics (5 credits); Bachelor degree in Zootechnical sciences and technologies in animal productions (UNIPR);
- c. Applied Physics (3 credits); Master Degree in Veterinary medicine

II.2. OTHER EDUCATIONAL ASSIGNMENTS at UNIPR

- a. **2014**-Coordinator of the modular course: 1005246 - FISICA APPLICATA, MATEMATICA DI BASE APPLICATA ALLE SCIENZE BIOMEDICHE, INFORMATICS - APPLIED PHYSICS, BASIC MATHEMATICS FOR BIOMEDICAL SCIENCES, INFORMATICS, Master degree 5029 - MEDICINA VETERINARIA
- b. **2014**-Coordinator of the modular course: 06493 - FISICA, STATISTICA E INFORMATICA - PHYSICS
Bachelor degree: 3020 - SCIENZE ZOOTECNICHE E TECNOLOGIE DELLE PRODUZIONI ANIMALI
- c. **2010**-Responsible for: 1005155 - IDONEITA' DI LINGUA INGLESE B1 - ENGLISH LANGUAGE QUALIFYING EXAM B1, Bachelor degree: 3026 - FISICA
- c. **2013**-Responsible for: 1005267 - IDONEITA' DI LINGUA INGLESE B2 - ENGLISH LANGUAGE QUALIFYING EXAM B2, Master degree: 5036 – FISICA

II.3. EDUCATIONAL ACTIVITY OUTSIDE ITALY

- a. DFG graduate college (GRK 640) "Sensory photoreceptors in natural and artificial systems", University of Regensburg (GER). Lezione: Photoacoustics of Photoreceptors, July 20 – 23 , 2001, Nové Hradý, Czech Republic.
- b. AA2011-2012; 2012-2013; 2013-2014: Experimental course "Advanced protein biochemistry", Prof. Wolfgang Gärtner, for the Master in Biochemistry, at the University of Düsseldorf, GER. Personal engagement: steady-state and time-resolved fluorescence; lessons of photobiophysics.
- c. 16th-30th April 2016: 12 h lessons within the "Photobiology" Course at the Huazhong Agricultural University, WUHAN CHN

II.4. SUPERVISING AND TUTORING

- a. Supervision of 3 PhD thesis
- b. Supervision or co-supervision of 15 bachelor and master degree thesis
- c. Supervision of 1 Master Thesis in Chemistry for ERASMUS PLUS SMT 2016/2017, LA with Heinrich Heine Universitaet-Duesseldorf (GER)

II.5. ORIENTATION AND DIFFUSION OF SCIENTIFIC CULTURE

March 2013-2018: Delegate to of the Physics course at UNIPR for: **a.** coordination of orientation activities for ingoing students; **b.** diffusion of scientific culture. **c.** local organization of The European Researchers' Night; **d.** Curator of the related web pages

http://smfi.unipr.it/it/Fisica_orientamento_divulgazione

April 2018-: local organization of The European Researchers' Night and other science divulgation activities

III. PUBLICATIONS

ABA LOSI LIST OF PUBLICATIONS <https://orcid.org/0000-0003-0497-2723>

a. Journal Articles

1. Ding, Y., Zhao, Z., Matysik, J., Gärtner, W., & Losi, A.. Mapping the role of aromatic amino acids within a blue-light sensing LOV domain. *Physical Chemistry Chemical Physics*, 2021, 23: 16767-16775.
2. Losi, A., Gärtner, W. A light life together: photosensing in the plant microbiota. *Photochem Photobiol Sci.* 2021, 20: 451-473
3. Eleonora Consiglieri, Qian-Zhao Xu, Kai-Hong Zao, Wolfgang Gaertner and Aba Losi, The first molecular characterisation of blue- and red-light photoreceptors from *Methylobacterium radiotolerans*, *Phys. Chem. Chem. Phys.*, 2020, 22:12434-12446
4. Eugenia Polverini, Florian Karl Schackert and Aba Losi, Interplay among the "flipping" glutamine, a conserved phenylalanine, water and hydrogen bonds within a blue-light sensing LOV domain, *Photochem. Photobiol. Sci.*, 2020, 19: 892–904

5. Eleonora Consiglieri, Qianzhao Xu, Mikkel Bregnhøj, Michael Westberg, Peter R. Ogilby and Aba Losi, Single mutation in a novel bacterial LOV protein yields a singlet oxygen generator, *Photochem. Photobiol. Sci.*, 2019, 18: 2657 - 2660
6. Eleonora Consiglieri, Alexander Gutt, Wolfgang Gaertner, Luiz Schubert, Cristiano Viappiani, Stefania Abbruzzetti and Aba Losi, [Dynamics and efficiency of photoswitching in biliverdin-binding phytochromes](#), *Photochem. Photobiol. Sci.*, 2019, 18, 2484-2496
7. Qian-Zhao Xu,, Pavlo Bielytskyi, James Otis, Christina Lang, Jon Hughes, Kai-Hong Zhao, Aba Losi , Wolfgang Gaertner and Chen Song, [MAS NMR on a Red/Far-Red Photochromic Cyanobacteriochrome All2699 from Nostoc](#), *Int. J. Mol. Sci.* 2019, 20, 3656;
8. W.-L.Ding, Y.-N. Hou, Z.-Z. Tan, S.-P. Jiang, D. Miao, A. Losi, W. Gaertner, H. Scheer, K.-H. Zhao, [Far-red acclimating cyanobacterium as versatile source for bright fluorescent biomarkers](#), *BBA - Molecular Cell Research*, 2018, 1865, 1649-1656
9. A. Losi, K. Gardner, A. Möglich, Blue-Light Receptors for Optogenetics, *Chem. Rev.*, 2018, 118, 10659-10709
10. A. Losi, H. R. Bonomi, N. Michael, K.Tang, K.-H. Zhao, Time-resolved energetics of photoprocesses in prokaryotic phytochrome-related photoreceptors, *Photochem. Photobiol.*, 2017, 93: 733-740
11. J. Simon, A. Losi, K.-H. Zhao, W. Gaertner, FRET in a Synthetic Flavin- and Bilin-binding Protein, *Photochem. Photobiol.*, 2017, 93: 1057-1062
12. A. Losi, W. Gaertner, [Solving blue-light riddles: new lessons from flavin-binding LOV photoreceptors](#), *Photochem. Photobiol.*, 2017, 93: 141-158
13. A. Ricci, L. Dramis, R. Shah, W. Gaertner, [A. Losi, Visualizing the relevance of bacterial blue- and red-light receptors during plant-pathogen interaction](#), *Environ. Microbiol. Rep.*, 2015, 7: 795-802
14. A. Losi, C. Mandalari, W. Gaertner, The evolution and functional role of flavin-based prokaryotic photoreceptors, *Photochem. Photobiol.*, 2015, 91: 1021-1031
15. I. Kraiselburd, A. Gutt, A. Losi, W. Gaertner. E. Orellano, Functional Characterization of a LOV-Histidine Kinase Photoreceptor from *Xanthomonas citri subsp. citri*, *Photochem. Photobiol.*, 2015, 91: 1123-1132
16. A. Losi, S. Abbruzzetti, Photofunctional proteins: how nature keeps the laboratories updated about light and life, *Photochem. Photobiol. Sci.*, 2015,14, 198-199
17. F.Pennacchietti, A. Losi, X.-L. Xu, K.-H. Zhao, W.Gaertner, C. Viappiani, F. Cella Zanacchi, A. Diaspro and S. Abbruzzetti, [Photochromic conversion in a red/green cyanobacteriochrome](#) from *Synechocystis* PCC6803: quantum yields in solution and photoswitching dynamics in living *E.coli* cells, *Photochem. Photobiol. Sci.*, 2015, 14: 229-237
18. F. Pennacchietti, S.Abbuzzetti, A.Losi, C. Mandalari, R. Bedotti, C. Viappiani. , F. Cella Zanacchi, A. Diaspro, W.Gaertner, [The dark recovery rate in the photocycle of the bacterial photoreceptor YtvA](#) is affected by the cellular environment and by hydration, *PLoS ONE*, 2014, 9: e107489. doi:10.1371/journal.pone.0107489
19. Z.-H. Chen, S. Raffelberg, A. Losi, P. Schaap, W. Gaertner, A cyanobacterial light activated adenylyl cyclase partially restores development of a *Dictyostelium discoideum*, adenylyl cyclase a null mutant, 2014, *J. Biotechnol.*191, 246-249
20. A. Losi, C. Mandalari and W. Gaertner, [From plant infectivity to growth patterns: the role of blue-light sensing in the prokaryotic world](#), *Plants*, 2014, 3, 70-94
21. S. Raffelberg, L. Wang, S. Gao, A. Losi, W. Gaertner and G. Nagel, A LOV-domain-mediated blue-light-activated adenylate cyclase from the cyanobacterium *Microcoleus chthonoplastes* PCC 7420, *Biochem. J.*, 2013, 455: 359-365
22. S. Raffelberg, A.Gutt, W. Gaertner, C. Mandalari, S. Abbruzzetti, C. Viappiani and A. Losi, The amino acids surrounding the flavin 7a-methyl group determine the UVA spectral features of a LOV protein, *Biol. Chem.*, 2013, 394: 1517-1528,
23. C.Engelhard, S. Raffelberg, Y. Tang, R. P. Diensthuber, A.Moeglich, A. Losi,W. Gaertner and R.Bittl, A structural model for the full-length blue light-sensing protein YtvA from *Bacillus subtilis*, based on EPR spectroscopy, *Photochem. Photobiol. Sci.*, 2013, 12: 1855-1863
24. A. Losi, Blue-light photoreceptors: from activation to advanced applications, *Photochem. Photobiol. Sci.*, 2013, 12:1124.
25. C. Mandalari, A. Losi and W. Gaertner, Distance-tree analysis, distribution and co-presence of bilin- and flavin-binding prokaryotic photoreceptors for visible light, *Photochem. Photobiol. Sci.*, 2013, 12:1144-1157

26. A. Losi, W. Gaertner, S. Raffelberg, F. Cella Zanacchi, P. Bianchini, A. Diaspro, C. Mandalari, S. Abbruzzetti and C. Viappiani, [A photochromic bacterial photoreceptor with potential for super-resolution microscopy](#), *Photochem. Photobiol. Sci.*, 2013, 12, 231-235.
27. I. Kraiselburd, A.I. Alet, M.L. Tondo, S. Petrocelli, L.D. Daurelio LD, J. Monzon, O.A. Ruiz, A. Losi, E. G. Orellano, A LOV Protein Modulates the Physiological Attributes of *Xanthomonas axonopodis* pv. citri Relevant for Host Plant Colonization., *PLoS ONE*, 2012, 7: e38226.
28. D. Bauer, F.-P. Montforts, A. Losi H. Goerner Photoprocesses of chlorin e6 glucose derivatives, *Photochem. Photobiol. Sci.*, 2012, 11: 925-930 DOI: 10.1039/c1pp05303e ; ISSN: 1474-905X; IF: 2.923 (rank = Q2)
29. A. Losi, W. Gaertner, The Evolution of Flavin-Binding Photoreceptors: An Ancient Chromophore Serving Trendy Blue-Light Sensors, *Annu. Rev. Plant Biol.*, 2012, 63, 49-72.
30. G. Pathak, A. Losi and W. Gaertner, Metagenome-based screening reveals worldwide distribution of LOV-domain proteins, *Photochem. Photobiol.*, 2012, 88, 107-118.
31. A. Losi, A. and W. Gaertner, Old chromophores, new photoactivation paradigms, trendy applications: flavins in LOV and BLUF Photoreceptors, *Photochem. Photobiol.*, 2011, **87**, 491-510.
32. S. Raffelberg, M. Mansurova, W. Gaertner and **A. Losi**, Modulation of the photocycle of a LOV domain photoreceptor by the hydrogen bonding network, *J. Am. Chem. Soc.*, 2011, **133**, 5346-5356.
33. M. Stierl, P. Stumpf, D. Udvari, R. Gueta, R. Hagedorn, A. Losi, W. Gaertner, L. Petereit, M. Efetova, M. Schwarzel, T. G. Oertner, G. Nagel and P. Hegemann, Light-modulation of cellular cAMP by a small bacterial photoactivated adenyl cyclase, bPAC, of the soil bacterium *Beggiatoa*, *J. Biol. Chem.*, 2011, **286**, 1181-1188.
34. A. Losi, C. Viappiani and S. Nonell, Photofunctional proteins: from understanding to engineering, *Photochem. Photobiol. Sci.*, 2010, **9**, 1285.
35. Z. Cao, E. Livoti, A. Losi and W. Gaertner, A Blue Light-inducible Phosphodiesterase Activity in the Cyanobacterium *Synechococcus elongatus*, *Photochem. Photobiol.*, 2010, **86**, 606-611.
36. Y. Tang, Z. Cao, E. Livoti, U. Krauss, K.-E. Jaeger, W. Gaertner and **A. Losi**, Interdomain signalling in the blue-light sensing and GTP-binding protein YtvA: a mutagenesis study uncovering the importance of specific protein sites, *Photochem. Photobiol. Sci.*, 2010, **9**, 47-56.
37. K. Jentsch, A. Wirtz, F. Circolone, T. Drepper, A. Losi, W. Gaertner, K.-E. Jaeger and U. Krauss, Mutual Exchange of Kinetic Properties by Extended Mutagenesis in Two Short LOV Domain Proteins from *Pseudomonas putida*, *Biochemistry*, 2009, **48**, 10321-10333.
38. U. Krauss, B. Q. Minh, A. Losi, W. Gaertner, T. Eggert, A. von Haeseler and K.-E. Jaeger, The distribution and phylogeny of light, oxygen, voltage (LOV) blue-light signaling proteins in the three kingdoms of life, *J. Bacteriol.*, 2009, **191**, 7234-7242.
39. M. Avila Perez, J. Vreede, Y. Tang, O. Bende, A. Losi, W. Gaertner and K. Hellingwerf, *In vivo* mutational analysis of YTV A from *Bacillus subtilis*: Mechanism of light-activation of the general stress response, *J. Biol. Chem.*, 2009, **284**, 24958-24964.
40. H. Ogata, Z. Cao, A. Losi, W. Gaertner, Crystallization and preliminary X-ray analysis of LOV domain of blue-light receptor YtvA from *Bacillus amyloliquefaciens* FZB42, *Acta Crystallographica Section F*, 2009, **65**, 853-855.
41. G.P. Pathak, A. Ehrenreich, A. Losi, W.R. Streit, and W. Gaertner, Novel Blue Light-Sensitive Proteins from a Metagenomic Approach, *Environ. Microbiol.*, 2009, **11**, 2388-2399.
42. A. Losi and W. Gaertner, Bacterial bilin- and flavin-binding photoreceptors, *Photochem. Photobiol. Sci.*, 2008, **7**, 1168-1178. DOI: 10.1039/b802472c; ISSN: 1474-905X; IF =2.144
43. Z. Cao, V. Buttani, A. Losi and W. Gaertner, A blue light inducible two component signal transduction system in the plant pathogen *Pseudomonas syringae* pv. *tomato*, *Biophys. J.*, 2008, 94, 897-905.
44. **A. Losi** and W. Gaertner Shedding (blue) light on algal gene expression, *Proc. Nat. Acad. Sci. USA*, 2008, 105, 7-8.
45. **A. Losi**, Flavin-based Blue-light Photosensors: a Photobiophysics Update, *Photochem. Photobiol.* 2007, 83, 1283-1300.
46. V. Buttani, W. Gaertner and **A. Losi**, NTP-binding properties of the blue-light receptor YtvA and effects of the E105L mutation, *Eur. Biophys. J.*, 2007, 36, 831-839. DOI: 10.1007/s00249-007-0155-1; ISSN: 0175-7571; IF =2.24

47. T. Drepper, T. Eggert, F. Circolone, A. Heck, U. Krauss, J.-K. Guterl, M. Wendorff, A. Losi, W. Gaertner and K.-E. Jaeger, Reporter proteins for in vivo fluorescence without oxygen, *Nature Biotechnol.*, 2007, 25, 443-445. DOI: 10.1038/nbt1293; ISSN: 1087-0156; IF =22.85
48. V. Buttani, **A. Losi**, T. Eggert, U. Krauss, K.-E. Jaeger, Z. Cao and W. Gaertner, Conformational analysis of the blue-light sensing protein YtvA reveals a competitive interface for LOV-LOV dimerization and interdomain interactions, *Photochem. Photobiol. Sci.*, 2007, 6, 41-49.
49. V. Buttani, **A. Losi**, E. Polverini and W. Gaertner, Blue news: NTP binding properties of the blue-light sensitive YtvA protein from *Bacillus subtilis*, *FEBS Lett.*, 2006, **580**, 3818-3822.
50. U. Krauss, A. Losi, W. Gaertner, K.-E. Jaeger and T. Eggert, Initial characterization of a blue-light sensing, phototropin-related protein from *Pseudomonas putida*: a paradigm for an extended LOV construct, *Phys. Chem. Chem. Phys.*, 2005, **7**, 2229-2236. DOI: 10.1039/b504554a ; ISSN: 1463-9076; IF = 2.519
51. **A. Losi**, E. Ghiraldelli, S. Jansen and W. Gaertner, Mutational effects on protein structural changes and interdomain interactions in the blue-light sensing LOV protein YtvA, *Photochem. Photobiol.*, 2005, 81, 1145-1152.
52. A. Losi, T. Gensch, M. A. van der Horst, K. J. Hellingwerf and S. E. Braslavsky, Hydrogen-Bond Network Probed by Time-Resolved Optoacoustic Spectroscopy: The Case of Photoactive Yellow Protein and the Effect of E46Q and E46A Mutations, *Phys. Chem. Chem. Phys.*, 2005, **7**, 2229-2236.
53. **A. Losi**, E. Ternelli and W. Gaertner, Tryptophan Fluorescence in the *Bacillus subtilis* Phototropin-related Protein YtvA as a Marker of Interdomain Interaction , *Photochem. Photobiol.*, 2004, 80, 150-153.
54. **A. Losi**, T. Kottke and P. Hegemann, Recording of Blue Light-Induced Energy and Volume Changes within the Wild-Type and Mutated Phot-LOV1 Domain from *Chlamydomonas reinhardtii*, *Biophys. J.*, 2004, 86, 1051-1060. ISSN: 0006-3495; IF = 4.585
55. **A. Losi**, The bacterial counterparts of plants phototropins, *Photochem. Photobiol. Sci.*, 2004, 3, 566-574.
56. T. Bednarz, A. Losi, W. Gaertner, P. Hegemann and J. Heberle, Functional variations among LOV domains as revealed by FT-IR difference spectroscopy, *Photochem. Photobiol. Sci.*, 2004, **3**, 575-579.
57. W. Gaertner, A. Losi, Crossing the borders: archaeal rhodopsins go bacterial, *Trends Microbiol.*, 2003, **11**, 405-407.
58. A. Losi, I. Yruela, M. Reus, A. R. Holzwarth and S. E. Braslavsky, Structural changes upon excitation of D1-D2-Cyt b(559) photosystem II reaction centers depend on the beta- carotene content, *Photochem. Photobiol. Sci.*, 2003, 2, 722-729.
59. A. Losi, S. E. Braslavsky, The time-resolved thermodynamics of the chromophore-protein interactions in biological photosensors. Learning from photothermal measurements, *Phys. Chem. Chem. Phys.*, 2003, **5**, 2739-2750.
60. **A. Losi**, B. Quest and W. Gaertner, Listening to the blue: the time-resolved thermodynamics of the bacterial blue-light receptor YtvA and its isolated LOV domain, *Photochem. Photobiol. Sci.*, 2003, **2**, 759-766.
61. **A. Losi**, E. Polverini, B. Quest and W. Gaertner, First evidence for phototropin-related blue- light receptors in prokaryotes, *Biophys. J.*, 2002, 82, 2627-2634.
62. A. Losi, A. A. Wegener, M. Engelhard and S. E. Braslavsky, Thermodynamics of the early steps in the photocycle of *Natronobacterium pharaonis* halorhodopsin. Influence of medium and of anion substitution, *Photochem. Photobiol.*, 2001, **74**, 495-503.
63. A. Losi, A. A. Wegener, M. Engelhardt and S. E. Braslavsky, Enthalpy-entropy ompensation in a photocycle: The K to L transition in sensory rhodopsin II from *Natronobacterium pharaonis*, *J. Am. Chem. Soc.*, 2001, **123**, 1766-1767.
64. A. Losi, A. A. Wegener, M. Engelhard, W. Gaertner and S. E. Braslavsky, Aspartate 75 mutation in sensory rhodopsin II from *Natronobacterium pharaonis* does not influence the production of the K-like intermediate, but strongly affects its relaxation pathway, *Biophys. J.*, 2000, **78**, 2581-2589.
65. A. Losi, I. Michler, W. Gaertner and S. E. Braslavsky, Time-resolved thermodynamic changes photoinduced in 5,12-*trans*-locked bacteriorhodopsin. Evidence that retinal isomerization is required for protein activation., *Photochem. Photobiol.*, 2000, **72**, 590-597.

66. A. Losi, S. E. Braslavsky, W. Gaertner and J. L. Spudich, Time-resolved absorption and photothermal measurements with sensory rhodopsin I from *Halobacterium salinarum*, *Biophys. J.*, 1999, **76**, 2183-2191. ISSN: 0006-3495; IF = 4.58;
67. A. Losi, A. A. Wegener, M. Engelhard, W. Gaertner and S. E. Braslavsky, Time-resolved absorption and photothermal measurements with recombinant sensory rhodopsin II from *Natronobacterium pharaonis*, *Biophys. J.*, 1999, **77**, 3277-3286.
68. **A. Losi**, A. Veccli and C. Viappiani, Photoinduced structural volume changes in aqueous solutions of blepharismine, *Photochem. Photobiol.*, 1999, **69**, 435-442.
69. A. Losi, C. Viappiani, Reaction volume and rate constants for the excited-state proton transfer in aqueous solutions of naphthols, *Chem. Phys. Lett.*, 1998, **289**, 500-506.
70. T. A. Wells, A. Losi, R.K. Dai, P. Scott S. M. Park, J. Goldbeck and P. S. Song, Electron transfer quenching and photoinduced EPR of hypericin and the ciliate photoreceptor stentorin, *J. Phys. Chem. A*, 1997, **101**, 366-372.
71. N. Angelini, R. Cubeddu, F. Lenci, A. Losi, A. Pifferi, A. Sgarbossa, P. Taroni, A. Veccli and C. Viappiani, Artificial model of photoreceptors: effect of quenchers on the fluorescence properties of hypericin embedded in liposomes, *J. Photochem. Photobiol. B: Biol.*, 1997, **38**, 245-252.
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