

Publications du groupe « Cristallographie cinétique des protéines »

2008

D. Bourgeois

The structural dynamics of myoglobin investigated by sub-nanosecond crystallography
Actualité Chimique.(2008), **317**, 55-59

M. Brunori, D. Bourgeois & B. Vallone

Structural dynamics of myoglobin
Meth. Enzymol. (2008), **437**, 397-416

J.P.Colletier, D.Bourgeois, B. Sanson, D. Fournier, J.L. Sussman, I. Silman & M. Weik.

Shoot-and-Trap: Use of specific x-ray damage to study structural protein dynamics by temperature-controlled cryo-crystallography
PNAS(2008) , **105(33)**, 11742-47.

M.H. Vos, A. Battistoni, C. Lechauve, M.C. Marden, L. Kiger, A. Desbois, E. Pilet, E. de Rosny & U. Liebl.

Ultrafast heme-residue bond formation in six-coordinate heme proteins: implications for functional ligand exchange.
Biochemistry (2008), **47(21)**, 5718-23.

2007

J. E. McGeehan, P. Carpentier, A. Royant, D. Bourgeois, and R. B.G. Ravelli

X-ray Radiation-induced damage in DNA monitored by online Raman
J. Synchrotron Rad.(2007), **14**, 97-108..

G. Katona, P. Carpentier, V. Nivière, V. Adam, P. Amara, J. Ohana, N. Tsanov, & D. Bourgeois

Raman assisted crystallography reveals end-on peroxide intermediates in a non-heme iron enzyme
Science.(2007), **316**, 449-52

M. Brunori, D. Bourgeois & B. Vallone

Structural dynamics of myoglobin
Meth. Enzymol. (2007), in press

D. Bourgeois, F. Schotte, M. Brunori & B. Vallone

Time-resolved Laue crystallography as a tool to investigate photo-activated protein dynamics
Photochem. Photobiol. Sci. (2007), **6**, 1047 - 1056

A. Royant , P. Carpentier, , J. Ohana, J. McGeehan, B. Paetzold, M. Noirclerc-Savoie, X. Vernede & D. Bourgeois

Advances in spectroscopic methods for biological crystals, part II: fluorescence lifetime measurements”

J. Appl. Cryst. (2007), **40**, 1105-1112

P. Carpentier, A. Royant, J. Ohana & D. Bourgeois

Advances in spectroscopic methods for biological crystals, part II: Raman spectroscopy

J. Appl. Cryst. (2007), **40**, 1113-1122

D. Bourgeois

The structural dynamics of myoglobin investigated by sub-nanosecond crystallography.

Actualité Chimique.(2007), in press

D. Bourgeois, E. de Rosny, G. Katona

La cristallographie cinétique : un outil pour filmer les protéines au travail

Biofutur.(2007), **280**, 48-51

J.P.Colletier, A. Royant, A. Specht, B. Sanson, F. Nachon, P. Masson, G. Zaccai, J.L. Sussman, M. Goeldner, I. Silman, D. Bourgeois & M. Weik.

"Use of a 'caged' analogue to study the traffic of choline within acetylcholinesterase by kinetic crystallography."

Acta. Cryst. D, (2007), **63**, 1115-1128.

2006

P. Williams, L. Coates, F. Mohamed, R. Gill, P. Erskine, D. Bourgeois, S. Wood, C. Anthony and J. B. Cooper

The X-ray structure of the unusual *c*-type cytochrome, cytochrome c_L from the methylotrophic bacterium, *Methylobacterium extorquens*"

J. Mol. Biol.(2006), **357**, 151-62.

D. Bourgeois, B. Vallone, A. Arcovito, G. Sciara, F. Schotte, P.A. Anfinrud & M. Brunori

Extended sub-nanosecond structural dynamics of myoglobin revealed by laue crystallography

Proceedings of The National Academy of Sciences USA (2006) , 103(13), 4924-4929..

X. Vernede, B. Lavault, J. Ohana, D. Nurizzo, J. Joly, L. Jacquamet, F. Felisaz, F. Cipriani & D. Bourgeois

UV laser excited fluorescence as a tool to visualize protein crystals mounted in loops.

Acta Crystallographica D Biological Crystallography, (2006), **62**, 253-261

E. de Rosny, A. de Groot, C. Jullian-Binard, J. Gaillard, F. Borel, E. Pebay-Peyroula, J.C. Fontecilla-Camps & H.M. Jouve

Drosophila nuclear receptor E75 is a thiolate hemoprotein.

Biochemistry, (2006), **45(32)**, 9727-34.

2005

D. Bourgeois and A. Royant.

Advances in Kinetic Crystallography

Curr. Opin. Struc. Biol. (2005) 15, 1-10

Fioravanti E, Adam V, Munier-Lehmann H & Bourgeois D

The crystal structure of *Mycobacterium tuberculosis* thymidylate kinase in complex with 3'-azidodeoxythymidine monophosphate suggests a mechanism for competitive inhibition.

Biochemistry (2005) **44**, 130-137.

2004

Brunori M, Bourgeois D & Vallone B.

The structural dynamics of myoglobin.

Journal of Structural Biology (2004) 147(3): 223-234.

Adam V, Royant A, Niviere V, Molina-Heredia FP & Bourgeois D.

Structure of superoxide reductase bound to ferrocyanide and active site expansion upon X-ray-induced photoreduction.

Structure (2004) 12(9): 1729-1740.

Dias JM, Alves T, Bonifacio C, Pereira AS, Trincao J, Bourgeois D, Moura I & Romao MJ

Structural basis for the mechanism of Ca²⁺ activation of the di-heme cytochrome c peroxidase from *Pseudomonas nautica* 617.

Structure (2004) 12(6): 961-973

Weik M, Vernede X, Royant A & Bourgeois D

Temperature-derivative fluorescence spectroscopy as a tool to study dynamical changes in protein crystals.

Biophysical Journal (2004) 86: 3176-3185

2003

Bourgeois D, Vallone B, Schotte F, Arcovito A, Miele A E, Sciara G, Wulff M, Anfinrud P & Brunori M

Complex landscape of protein structural dynamics unveiled by nanosecond Laue crystallography.

Proceedings of The National Academy of Sciences USA (2003) 100(15): 8704-8709

Fioravanti E, Haouz A, Ursby T, Munier-Lehmann H, Delarue M & Bourgeois D
Mycobacterium tuberculosis thymidylate kinase: structural studies of intermediates along the reaction pathway.

Journal of Molecular Biology (2003) 327(5):1077-1092

Kort R, Ravelli R B, Schotte F, Bourgeois D, Crielaard W, Hellingwerf K J & Wulff M
Characterization of photocycle intermediates in crystalline photoactive yellow protein.

Photochemistry and Photobiology (2003) 78(2): 131-137

2002

Ursby T, Weik M, Fioravanti E, Delarue M, Goeldner M & Bourgeois D
Cryophotolysis of caged compounds: a technique for trapping intermediate states in protein crystals.

Acta Crystallographica D Biological Crystallography (2002) 58(4): 607-614

Bourgeois D, Vernede X, Adam V, Fioravanti E & Ursby T

A microspectrophotometer for UV-visible absorption and fluorescence studies of protein crystals.

Journal of Applied Crystallography (2002) 35(3): 319-326

2001

Specht A, Ursby T, Weik M, Peng L, Kroon J, Bourgeois D & Goeldner M

Cryophotolysis of ortho-Nitrobenzyl derivatives of enzyme ligands for the potential kinetic crystallography of macromolecules.

Chembiochem (2001) 11: 845-848

Srajer V, Ren Z, Teng T Y, Schmidt M, Ursby T, Bourgeois D, Pradervand C, Schildkamp W, Wulff M & Moffat K

Protein Conformational Relaxation and Ligand Migration in Myoglobin: A Nanosecond to Millisecond Molecular Movie from Time-Resolved Laue X-ray Diffraction.

Biochemistry (2001) 40(46): 13802-13815

Ren Z, Perman B, Srajer V, Teng T Y, Pradervand C, Bourgeois D, Schotte F, Ursby T, Kort R, Wulff M & Moffat K

A Molecular Movie at 1.8 Å Resolution Displays the Photocycle of Photoactive Yellow Protein, a Eubacterial Blue-Light Receptor, from Nanoseconds to Seconds.

Biochemistry (2001) 40(46): 13788-13801

2000

Bourgeois D, Wagner U & Wulff M

Towards automated Laue data processing: application to the choice of optimal X-ray spectrum.
Acta Crystallographica Section D-Biological Crystallography (2000) 56(8): 973-985

Srajer V, Crosson S, Schmidt M, Key J, Schotte F, Anderson S, Perman B, Ren Z, Teng TY, Bourgeois D, Wulff M & Moffat K

Extraction of accurate structure-factor amplitudes from Laue data: wavelength normalization with wiggler and undulator X-ray sources.

Journal of Synchrotron Radiation (2000) 7: 236-244