

Curriculum Vitae

Laurent BOPP

Né le 21/04/74 à Strasbourg
Nationalité française

LSCE, Orme des Merisiers, CE Saclay
91191 Gif-sur-Yvette Cedex, France

☎ : 01 69 08 32 74

Fax : 01 69 08 30 73

✉ : Laurent.Bopp@lsce.ipsl.fr

Marié
4 Enfants

Expérience

Recherche :

2012 (oct) - : Directeur de Recherche CNRS à **IPSL/SCE**, Paris, France
2003-2012 : Chargé de Recherche CNRS au **IPSL/LSCE**, Paris, France
2012 (5 mois) : Séjour à **UCT & CHPC**, Cape Town, South Africa.
2007 (6 mois) : Séjour à **UEA**, Norwich, UK.
2002-2003 : Contrat Post-Doctoral au **LSCE** et au **LODyC**, Paris, France
2000-2001 : Coopérant Service National (Scientifique Chercheur) au **MPI Biogeochemie**, Jena,
1998-2001 : Thèse de doctorat au **LSCE**, Paris, France.
1996 (6 mois) : Stage au **MIT**, Boston, Etats-Unis.

Prix

2011 : Médaille de la Société d'Océanographie de France

Administration de la Recherche:

Responsable du Thème Climat et Cycles au LSCE (70 personnes) (depuis 2014)
Responsable de l'équipe BIOMAC au LSCE (12 personnes) (2010-2014)
Membre du Scientific Steering Committee de IGBP/IMBER (depuis 2013)
Membre du Data Management Committee de GEOTRACES (depuis 2013)
Membre du Comité Recherche du LABEX-IPSL (depuis 2012)
Membre du Conseil Scientifique de l'IPSL (depuis 2009)
Membre du Conseil Scientifique du Pôle de Modélisation de l'IPSL (depuis 2005)
Membre de la Commission des Thèses du LSCE (2008-2011)
Membre du Comité d'évaluation des ANR Blanc & Jeune Chercheur (2010-2012)
Membre du CS INSU-SYSTER (2009-2011)
Membre du CNU Section 37 (2009-2011)
Membre du Scientific Steering Committee de IGBP/AIMES (2005-2008)
Membre du Conseil de Laboratoire du LSCE (2004-2008)
Coordinateur d'un projet ANR (GOBAC) ; Participation à plusieurs projets ANR
PI de plusieurs projets européens (FP6-CARBOOCEAN, FP6-Euroceans, FP6-GreenCycles, FP7 EPOCA, FP7 MEECE, FP7-GreenCycles2, FP7-CarboChange, FP7-Past4Future)
Editeur associé pour Biogéosciences.

Encadrement

7 thèses co-encadrées (P. Le Mezo 2013- , T. Bourgeois 2013- , J. Martinez-Rey 2011-2015 , V. Mariotti 2010-2013, R. Séférian 2010-2013, A. Kane 2006-2010, P. Cadule 2005-2009)
7 stages de M2 (P. LeMezo 2013, T. Bourgeois 2013, A. Belattaf, 2012, V. Mariotti, 2010, R. Séférian 2010, A. Kane 2006, L. Bouali 2005)
2 stages de M1 (A. Matras, 2005, A. Auby 2006)
2 stages de L3 (S. Dutreuil, 2008, S. Berthou, 2009)

Enseignement :

2006-2010 : Membre du Jury de l'Agrégation de Sciences de la Vie, de la Terre et de l'Univers.
2005-2013 : Cours et Responsable Modélisation à l'Ecole d'Eté SOLAS
2011-2013 : cours de thèse ED129 (Paris VI / UVSQ), cours de M1/M2 (Paris VI, Paris XI)
1998-2013 : Cours/TD/TP en préparation à l'agrégation et au capes de SVT (PVI, ENS, Orsay)
1998-2001 : Monitorat en Physique et Géosciences (UVSQ)

Formation

2011-06	: HDR (UVSQ)
1998-01	: Doctorat Sciences de l'Environnement (LSCE – Paris 6)
1997-98	: DEA Océano., Météo. et Environnement (Paris 6) Magistère des Sciences de la Terre (ENS-Paris 6-Paris 11)
1996-97	: Agrégation des Sciences de la Vie et de la Terre
1994-96	: Maîtrise et Licence des Sciences de la Terre (Paris 6)
1994-98	: Ecole Normale Supérieure de la rue d'Ulm.

Publications

1. Revues à Comité de Lecture

Mai 2015 : 124 publications de rang A / h-factor = 35 (ISI web of knowledge)

2015 (6)

1. Launois, T., Belviso, S., **Bopp, L.**, Fichot, C.G., and Peylin, P. A new model for the global biogeochemical cycle of carbonyl sulfide – Part 1: Assessment of direct marine emissions with an oceanic general circulation and biogeochemistry model. *Atmos. Chem. Phys.* *15*, 2295–2312, 2015
2. Le Quéré, C., Moriarty, R., Andrew, R.M., Peters, G.P., Ciais, P., Friedlingstein, P., Jones, S.D., Sitch, S., Tans, P., Arneeth, A., et al. (incl. **L. Bopp**). Global carbon budget 2014. *Earth System Science Data* *7*, 47–85, 2015
3. Resplandy, L., Séférian, R., and **Bopp, L.** Natural variability of CO₂ and O₂ fluxes: What can we learn from centuries-long climate models simulations? *J. Geophys. Res. Oceans* *120*, 384–404, 2015
4. Lefort, S., Aumont, O., **Bopp, L.**, Arsouze, T., Gehlen, M., and Maury, O. Spatial and body-size dependent response of marine pelagic communities to projected global climate change. *Global Change Biology* *21*, 154-164, 2015.
5. Nevison, C. D., Manizza, M., Keeling, R. F., Kahru, M., **Bopp, L.**, Dunne, J., Tiputra, J., Ilyina, T., and Mitchell, B. G.: Evaluating the ocean biogeochemical components of Earth system models using atmospheric potential oxygen and ocean color data, *Biogeosciences*, *12*, 193-208, doi:10.5194/bg-12-193-2015, 2015.
6. Sitch, S., Friedlingstein, P., Gruber, N., Jones, S. D., Murray-Tortarolo, G., Ahlström, A., Doney, S. C., Graven, H., Heinze, C., Huntingford, C., Levis, S., Levy, P. E., Lomas, M., Poulter, B., Viovy, N., Zaehle, S., Zeng, N., Arneeth, A., Bonan, G., **Bopp, L.**, Canadell, J. G., Chevallier, F., Ciais, P., Ellis, R., Gloor, M., Peylin, P., Piao, S. L., Le Quéré, C., Smith, B., Zhu, Z., and Myneni, R.: Recent trends and drivers of regional sources and sinks of carbon dioxide, *Biogeosciences*, *12*, 653-679, doi:10.5194/bg-12-653-2015, 2015.
7. Roy, T., Lombard, F., **Bopp, L.**, and Gehlen, M. Projected impacts of climate change and ocean acidification on the global biogeography of planktonic Foraminifera. *Biogeosciences* *12*, 2873–2889, 2015.
8. Martinez-Rey, *Biogeosciences*, 2015
9. Bouttes et al. *Geophysical Model Development*, 2015
- 10.

2014 (12)

1. Dueri S., **L. Bopp** and O. Maury, Projecting the impacts of climate change on skipjack tuna abundance and spatial distribution, *Global Change Biology*, *Global Change Biology*, 20: 742–753. doi: 10.1111/gcb.12460, 2014.
2. Chust, G., Allen, J.I., **Bopp, L.**, Schrum, C., Holt, J., Tsiaras, K., Zavatarelli, M., Chifflet, M., Cannaby, H., Dadou, I., et al. . Biomass changes and trophic amplification of plankton in a warmer ocean. *Global Change Biology* 20, 2124–2139, 2014
3. Doney, S., **Bopp, L.**, and Long, M. Historical and Future Trends in Ocean Climate and Biogeochemistry. *Oceanography* 27, 108–119, 2014
4. Gehlen, M., Seferian, R., Jones, D.O.B., Roy, T., Roth, R., Barry, J., **Bopp, L.**, Doney, S.C., Dunne, J.P., Heinze, C., et al. Projected pH reductions by 2100 might put deep North Atlantic biodiversity at risk. *Biogeosciences* 11, 6955–6967, 2014
5. Guieu, C., Aumont, O., Paytan, A., **Bopp, L.**, Law, C.S., Mahowald, N., Achterberg, E.P., Marañón, E., Salihoglu, B., Crise, A., et al. The significance of the episodic nature of atmospheric deposition to Low Nutrient Low Chlorophyll regions: Atmospheric pulses to LNLC ocean. *Global Biogeochemical Cycles* n/a – n/a, 2014
6. Le Quééré, C., Peters, G.P., Andres, R.J., Andrew, R.M., Boden, T.A., Ciais, P., Friedlingstein, P., Houghton, R.A., Marland, G., Moriarty, R., et al. (incl. **L. Bopp**). Global carbon budget 2013. *Earth System Science Data* 6, 235–263.
7. Rodgers, K.B., Aumont, O., Mikaloff Fletcher, S.E., Plancherel, Y., **Bopp, L.**, de Boyer Montégut, C., Iudicone, D., Keeling, R.F., Madec, G., and Wanninkhof, R. Strong sensitivity of Southern Ocean carbon uptake and nutrient cycling to wind stirring. *Biogeosciences* 11, 4077–4098, 2014.
8. Schwinger, J., Tjiputra, J.F., Heinze, C., **Bopp, L.**, Christian, J.R., Gehlen, M., Ilyina, T., Jones, C.D., Salas-Méllia, D., Segschneider, J., et al. Nonlinearity of Ocean Carbon Cycle Feedbacks in CMIP5 Earth System Models. *Journal of Climate* 27, 3869–3888, 2014
9. Seferian, R., **Bopp, L.**, Gehlen, M., Swingedouw, D., Mignot, J., Guilyardi, E., and Servonnat, J. Multiyear predictability of tropical marine productivity. *Proceedings of the National Academy of Sciences* 111, 11646–11651, 2014
10. Séférian, R., Ribes, A., and **Bopp, L.** Detecting the anthropogenic influences on recent changes in ocean carbon uptake: Detecting changes in ocean carbon uptake. *Geophysical Research Letters* 41, 5968–5977, 2014
11. Tagliabue, A., Aumont, O., and **Bopp, L.** The impact of different external sources of iron on the global carbon cycle. *Geophysical Research Letters* 41, 920–926, 2014.
12. Ciais, P., Dolman, A. J., Bombelli, A., Duren, R., Peregon, A., Rayner, P. J., Miller, C., Gobron, N., Kinderman, G., Marland, G., Gruber, N., Chevallier, F., Andres, R. J., Balsamo, G., **Bopp, L.**, Bréon, F.-M., Broquet, G., et al.: Current systematic carbon-cycle observations and the need for implementing a policy-relevant carbon observing system, *Biogeosciences*, 11, 3547-3602, doi:10.5194/bg-11-3547-2014, 2014.

2013 (25)

1. **Bopp, L.**, Resplandy, L., Orr, J. C., Doney, S. C., Dunne, J. P., Gehlen, M., Halloran, P., Heinze, C., Ilyina, T., Séférian, R., Tjiputra, J., and Vichi, M.: Multiple stressors of ocean ecosystems in the 21st century: projections with CMIP5 models, *Biogeosciences*, 10, 6225-6245, doi:10.5194/bg-10-6225-2013, 2013.
2. Mariotti, V., D. Paillard, D. M. Roche, N. Bouttes and **L. Bopp**, Simulated Last Glacial Maximum D14Catm and the deep glacial ocean carbon reservoir, *Radiocarbon*, 55 (2-3), DOI: 10.2458/azu_js_rc.55.16295, 2013.
3. Séférian, R., **Bopp, L.**, Swingedouw, D., and Servonnat, J.: Dynamical and biogeochemical control

- on the decadal variability of ocean carbon fluxes, *Earth Syst. Dynam.*, 4, 109-127, doi:10.5194/esd-4-109-2013, 2013.
4. Séférián R., **L. Bopp**, M. Gehlen, J. Orr, C. Éthé, P. Cadule, O. Aumont, D. Salas-y-Méla, A. Voldoire, G. Madec, Skill Assessment of Three Earth System Models with Common Marine Biogeochemistry, *Clim. Dyn.*, 40 (9-10), 10.1007/s00382-012-1362-8, 2013.
 5. Resplandy, L., **L. Bopp**, J. C. Orr, and J. P. Dunne, Role of mode and intermediate waters in future ocean acidification: analysis of CMIP5 models, *Geophys. Res. Lett.*, 40, 3091–3095 doi:10.1002/grl.50414., 2013.
 6. Vancoppenolle M., **Bopp L.**, Madec G., Dunne J., Ilyina T., Halloran P.R., Steiner N.: Future Arctic Ocean primary productivity from CMIP5 simulations: Uncertain outcome, but consistent mechanisms. *Global Biogeochemical Cycles*, doi:10.1002/gbc.20055, 2013.
 7. Levy, M., **L. Bopp**, P. Karleskind, L. Resplandy, **C. Ethe**, and F. Pinsard (2013), Physical pathways for carbon transfers between the surface mixed layer and the ocean interior, *Global Biogeochem. Cycles*, 27, doi:10.1002/gbc.20092
 8. Arora, V. K., G. J. Boer, P. Friedlingstein, M. Eby, J. R. Christian, C. D. Jones, G. Bonan, **L. Bopp**, V. Brovkin, P. Cadule, T. Hajima, T. Ilyina, J. F. Tjiputra, and Wu, T.: Carbon-concentration and carbon-climate feedbacks in CMIP5 Earth system models, *Journal of Climate*, 26 (15), 5289-5314, doi: 10.1175/JCLI-D-12-00494.1, 2013.
 9. Anav A. , P. Friedlingstein, M. Kidston, **L. Bopp**, P. Ciais, P. Cox, C. Jones, M. Jung, R. Myneni, Z. Zhu, Evaluating the land and ocean components of the global carbon cycle in the CMIP5 Earth System Models, *Journal of Climate* , 26, 6801–6843, doi: http://dx.doi.org/10.1175/JCLI-D-12-00417.1, 2013.
 10. Jones, C. D., Friedlingstein, P., Arora, V., **Bopp, L.**, Cadule, P., Reick, C., Segschneider, J., Tjiputra, J., Roelandt, C., Shevliakova, E., Kato, E., Hajima, T., Kawamiya, M., and Lindsay, K.: 21st Century compatible CO2 emissions and airborne fraction simulated by CMIP5 Earth System models under 4 Representative Concentration Pathways, *Journal of Climate*, 26(13), 4398-4413, doi : 10.1175/JCLI-D-12-00554.1, 2013.
 11. Moore, C.M., Mills, M.M., Arrigo, K.R., Berman-Frank, I., **L. Bopp**, Boyd, P.W., Galbraith, E.D., Geider, R.J., Guieu, C., Jaccard, S.L., Jickells, T.D., La Roche, J., Lenton, T., Mahowald, N.M., Marañón, E., Marinov, I., Moore, J.K., Nakatsuka, T., Oschlies, A., Saito, M.A., Thingstad, T.F., Tsuda, A., Ulloa, O. and Wallace, D., Oceanic nutrient limitation: processes, patterns and potential for change, *Nature Geosciences*, 6, 701-710. doi:10.1038/ngeo1765, 2013.
 12. Cocco, V., Joos, F., Steinacher, M., Frölicher, T. L., **Bopp, L.**, Dunne, J., Gehlen, M., Heinze, C., Orr, J., Oschlies, A., Schneider, B., Segschneider, J., and Tjiputra, J.: Oxygen and indicators of stress for marine life in multi-model global warming projections, *Biogeosciences*, 2013.
 13. Alvain S., Le Quéré C., **Bopp L.**, Racault M.F., Beaugrand G., Dessailly D. and Buitenhuis E., Rapid climatic driven shifts of diatoms at high latitudes, *Remote Sensing of Environment*, 132,195-201 ,2013.
 14. Beaulieu, C., Henson, S. A., Sarmiento, J. L., Dunne, J. P., Doney, S. C., Rykaczewski, R. R., and **Bopp, L.**: Factors challenging our ability to detect long-term trends in ocean chlorophyll, *Biogeosciences*, 10, 2711-2724, doi:10.5194/bg-10-2711-2013, 2013.
 15. Kohfeld, K.E., Graham R.M., de Boer A.M., Sime L.C., Wolff E.W., Le Quéré C., and **L. Bopp** , Southern Hemisphere Westerly Wind Changes during the LGM : paleo-data synthesis, *Quaternary Science Reviews*, 68 , 76-95 doi: 10.1016/j.quascirev.2013.01.017, 2013.
 16. Sime, L. C., Kohfeld, K.E., Le Quéré C., Wolff E.W., de Boer A.M., Graham R.M., and **L. Bopp**, Southern Hemisphere Westerly Wind Changes during the LGM Part II: Atmospheric GCM-observation comparison *Quaternary Science Reviews*, 64 Pages: 104-120 DOI: 10.1016/j.quascirev.2012.12.008, 2013.
 17. Sailley S.F., M. Vogt, S.C. Doney, M.N. Aita, **L. Bopp**, E.T. Buitenhuis, T. Hashioka, I. Lima, C. Le Quéré, Y. Yamanaka, Comparing food web structures and dynamics across a suite of global marine ecosystem models, *Ecological Modelling*, 261–262, 43-57, 2013.
 18. Le Quéré C., R. J. Andres, T. Boden, T. Conway, R. A. Houghton, J. I. House, G. Marland, G. P. Peters, G. van der Werf, A. Ahlström, R. M. Andrew, **L. Bopp**, J. G. Canadell, P. Ciais, S. C. Doney,

- C. Enright, P. Friedlingstein, C. Huntingford, A. K. Jain, C. Jourdain, E. Kato, R. F. Keeling, K. Klein Goldewijk, S. Levis, P. Levy, M. Lomas, B. Poulter, M. R. Raupach, J. Schwinger, S. Sitch, B. D. Stocker, N. Viovy, S. Zaehle, and N. Zeng, The global carbon budget 1959–2011, *Earth Syst. Sci. Data*, 1, 1–21, doi:10.5194/essd-1-1-2013, 2013.
19. Dufresne J-L, Foujols, M-A, Denvil, S., Caubel, A., Marti, O., Aumont, O., Balkanski, Y., Bekki, S., Bellenger, H., Benshila, R., Bony S., **Bopp, L.**, Braconnot, P., Brockmann, P., Cadule, P., Cheruy, F., Codron, F., Cozic, A., Cugnet, D., de Noblet, N., Duvel, J-P., Ethé, C., Fairhead, L., Fichet, T., Flavoni, S., Friedlingstein, P., Grandpeix, J-Y., Guez, L., Guilyardi, E., Hauglustaine, D., Hourdin, F., Idelkadi, A., Ghattas, J., Joussaume, S., Kageyama, M., Krinner, G., Labetoulle, S., Lahellec, A., Lefebvre, M-P., Lefevre, F., Levy, C., Li, Z. X., Lloyd, J., Lott, F., Madec, G., Mancip, M., Marchand, M., Masson, S., Meurdesoif, Y., Mignot, J., Musat, I., Parouty, S., Polcher, J., Rio, C., Schulz, M., Swingedouw, D., Szopa, S., Talandier, C., Terray, P., Viovy, N: Climate change projections using the IPSL-CM5 Earth System Model: from CMIP3 to CMIP5, *Clim. Dyn.*, 40 (9-10), 2123-2165, doi :10.1007/s00382-012-1636-1, 2013.
 20. Hourdin F., M-A Foujols, F. Codron, V. Guemas, J-L Dufresne, S. Bony, S. Denvil, L.Guez, F. Lott, J. Ghattas, P. Braconnot, O. Marti, Y. Meurdesoif, **L. Bopp**, Climate and sensitivity of the IPSL-CM5A coupled model: impact of the LMDZ atmospheric grid configuration, *Clim. Dyn.*, 40 (9-10), 2167-2192, 10.1007/s00382-012-1411-3, 2013.
 21. Kageyama M., Braconnot P., **Bopp L.**, Caubel A., Foujols M.-A., Guilyardi E., Khodri M., Lloyd J., Lombard F., Mariotti V., Marti O., Roy T., Woillez M.-N., Mid-Holocene and Last Glacial Maximum climate simulations with the IPSL model: Mid-Holocene and Last Glacial Maximum climate simulations with the IPSL model. Part II: model-data comparisons, *Clim. Dyn.*, 40 (9-10), 2447-2468 DOI: 10.1007/s00382-012-1488-8, 2013.
 22. Kageyama M., Braconnot P., **Bopp L.**, V. Mariotti, T. Roy, M.-N. Woillez, Caubel A., Foujols M.-A., Guilyardi E., Khodri M., Lloyd J., Lombard F., Marti O., Mid-Holocene and Last Glacial Maximum climate simulations with the IPSL model: Mid-Holocene and Last Glacial Maximum climate simulations with the IPSL model. Part I: Comparing IPSL-CM5A to IPSL-CM4, *Clim. Dyn.*, 40 (9-10), 2469-2495, doi :10.1007/s00382-012-1499-5, 2013.
 23. Hashioka, T., Vogt, M., Yamanaka, Y., Le Quéré, C., Buitenhuis, E. T., Aita, M. N., Alvain, S., **Bopp, L.**, Hirata, T., Lima, I., Saille, S., and Doney, S. C.: Phytoplankton competition during the spring bloom in four Plankton Functional Type Models, *Biogeosciences* 10, 6833-6850, doi:10.5194/bg-10-6833-2013, 2013.
 23. Foley, A. M., Dalmonech, D., Friend, A. D., Aires, F., Archibald, A., Bartlein, P., **Bopp, L.**, Chappellaz, J., Cox, P., Edwards, N. R., Feulner, G., Friedlingstein, P., Harrison, S. P., Hopcroft, P. O., Jones, C. D., Kolassa, J., Levine, J. G., Prentice, I. C., Pyle, J., Vázquez Riveiros, N., Wolff, E. W., and Zaehle, S.: Evaluation of biospheric components in Earth system models using modern and palaeo observations: the state-of-the-art, *Biogeosciences* 10, 8305-8328, doi:10.5194/bg-10-8305-2013, 2013.
 24. Vancoppenolle M., K. M. Meiners, C. Michel, **L. Bopp**, F. Brabant, G. Carnat, B. Delille, D. Lannuzel, G. Madec, S. Moreau, J.-L. Tison, P. van der Merwe, Role of sea ice in global biogeochemical cycles: emerging views and challenges, *Quaternary Science*, 2013.
 25. Peñuelas J, Poulter B, Sardans J, Ciais P, van der Velde M, **Bopp L**, Boucher O, Godderis Y, Hinsinger P, Llusia J, Nardin E, Vicca S, Obersteiner M, Janssens IA, Human-induced nitrogen-phosphorus imbalances alter natural and managed ecosystems across the globe, *Nature Communications*, 4:2934. doi: 10.1038/ncomms3934, 2013

2012 (9)

1. Mariotti V., **L. Bopp**, A. Tagliabue, M. Kageyama and D. Swingedouw, Marine productivity response to Heinrich events: a model study, *Climate of the Past*, 8, 1581-1598, doi:10.5194/cp-8-1581-2012, 2012.
2. Séférian R., D. Iudicone, **L. Bopp**, T. Roy and G. Madec, Water mass analysis of effect of climate change on air-sea CO₂ fluxes : the Southern Ocean, *J. of Clim.*, doi:10.1175/JCLI-D-11-00291.1. , 2012.

3. Resplandy L., M. Levy, **L. Bopp**, S. Pous, V. V. S. S. Sarma, and D. Kumar, Controlling factors of the OMZ in the Arabian Sea, *Biogeosciences*, 9, 5095-5109, doi:10.5194/bg-9-5095-2012, 2012.
4. Bouttes N., Paillard D., Roche D.M., Waelbroeck C., Kageyama M., Laurantou A., Michel E., **Bopp L.**, Impact of oceanic processes on the carbon cycle during the last termination. *Clim. Past* 8, 149-170, 2012
5. Belviso S., Masotti I., Tagliabue A., **L. Bopp**, Brockmann P., Fichot C., Caniaux G., Prieur L., Ras J., Uitz J., Loisel H., Dessailly D., Alvain S., Kasamatsu N., and Fukuchi M., DMS dynamics in the most oligotrophic subtropical zones of the global ocean. *Biogeochemistry*, DOI 10.1007/s10533-011-9648-1, 2012.
6. Ciais, P, Tagliabue A., M. Cuntz, **L. Bopp**, M. Scholze , G. Hoffmann , A. Laurantou , S. Harrison , I.C. Prentice , D. Kelley , C. Koven, S. Piao, Large inert carbon pool in the terrestrial biosphere during the last glacial maximum, *Nature Geosciences*, doi:10.1038/ngeo1324, 2012.
7. Duteil, O., Koeve, W., Oschlies, A., Aumont, O., Bianchi, D., **Bopp, L.**, Galbraith, E., Matear, R., Moore, J. K., Sarmiento, J. L., and Segschneider, J.: Preformed and regenerated phosphate in ocean general circulation models: can right total concentrations be wrong?, *Biogeosciences*, 9(5), 10.5194/bg-9-1797-2012, 2012.
8. Keller, K. M., F. Joos, C. C. Raible, V. Cocco, T. L. Froelicher, J. P. Dunne, M. Gehlen, T. Roy, **L. Bopp**, J. C. Orr, J. Tjiputra, C. Heinze, J. Segschneider, N. Metzl, Variability of the Ocean Carbon Cycle in Response to the North Atlantic Oscillation, *Tellus B*, 64, 18738, 2012.
9. Levy M., M. Lengaigne, **L. Bopp**, E. Vincent, G. Madec, C. Ethé, D. Kumar, V.V.S.S. Sarma, Contribution of tropical cyclones to the air-sea CO₂ flux: a global view, *Global Biogeochemical Cycl.*, doi:10.1029/2011GB004145, 2012.

2011 (11)

1. Bassinot F. C., C. Marzin, P. Braconnot, O. Marti, E. Mathien-Blard, F. Lombard, and **L. Bopp**, Holocene evolution of summer winds and marine productivity in the tropical Indian Ocean in response to insolation forcing: data-model comparison, *Clim. Past*, 7, 815-829, 2011
2. Bouttes, N., Paillard, D., Roche, D.M., Brovkin, V. and **Bopp, L.**, Last Glacial Maximum CO₂ and delta C-13 successfully reconciled. *Geophysical Research Letters*, 38: 5, 2011.
3. Fauchereau N., Tagliabue A., **Bopp L.**, and Monteiro P. M. S., The response of phytoplankton biomass to transient mixing events in the Southern Ocean, *Geophys. Res. Lett.*, 38, L17601, 2011.
4. Iudicone D., Rodgers K. B., Stendardo I., Aumont O., Madec G., **Bopp L.**, Mangoni O., and Ribera d'Alcalá M., Water masses as a unifying framework for understanding the Southern Ocean Carbon Cycle, *Biogeosciences*, 8, 1031-1052, 2011.
5. Kane A., Moulin C., Thiria S., **Bopp L.**, Berrada M., Tagliabue A., Crépon M., Aumont O., and Badran F., Improving the parameters of a global ocean biogeochemical model via variational assimilation of in situ data at five time series stations, *J. Geophys. Res.*, 116, C06011, 2011.
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12. **Bopp L.**, J. Chappellaz, M. Legrand, P. Friedlingstein, R. Delmas, Biogéochimie du Sytème climatique au cours du dernier million d'années, in *La Paléoclimatologie : Enquête sur les climats du passé*, Ed. JC Duplessy et G. Ramstein, edp sciences, 2013.

4. Conférences invités dans des congrès internationaux

- L. Bopp** and C. Jones, Ocean and land climate-carbon cycle feedbacks at the regional scale: analysis based on CMIP5 models. International Carbon Dioxide Conference 9th, Beijing, Chine (Juin 2013)
- L. Bopp**, Interactions of ocean acidification with physical climate change, *The Ocean in a High CO₂ world - III*, Monterey, USA (invité, Septembre 2012)
- L. Bopp**, From climate change and ocean acidification projections to marine biogeochemistry and ecosystems: recent modeling efforts at the global scale, *Planet under pressure 2012*, Londres, UK (invité, Mars 2012)
- L. Bopp**, Ocean Deoxygenation – Physical & Chemical drivers: Insight from global climate & marine biogeochemical models, *EuroCeans conference on Ocean Deoxygenation*, Toulouse (invité, Octobre 2011)
- L. Bopp**, The future ocean carbon cycle, *The Ocean Carbon Cycle at a time of change: Synthesis and vulnerabilities*, *Joint SOLAS/IMBER/IOCCP meeting*, UNESCO, Paris (invité, Septembre 2011)
- L. Bopp**, Stimulating the biological pump to mitigate climate change, *Chapman Conference on the Biological Pump*, Southampton, UK (invité, Septembre 2009)
- L. Bopp**, Biogeochemical consequences of ocean acidification, *The Ocean in a high CO₂ world – II*, Monaco (invité, Octobre 2008)
- L. Bopp**, Results from coupled carbon-climate models, *Surface Ocean CO₂ Variability and Vulnerabilities (co-sponsored by the IOCCP, SOLAS, IMBER, and the GCP)*, UNESCO, Paris, France, (invité, Juin 2007)
- L. Bopp**, New insights on the pre-industrial atmospheric pCO₂ inter-hemispheric gradient, *SOLAS Open*

Science Conference, Xiamen, China (invité, Mars 2007).

L. Bopp, Response of Marine Biogeochemistry to Future Changes in the Physics and Chemistry of the Ocean - Potential Feedbacks on the Carbon Cycle. *AGU Ocean Sciences Meeting*, Honolulu, Hawaii, USA. (invité, Février 2006)

L. Bopp, Aumont, O, Gehlen, M, Modelling global warming impact on ocean carbon uptake : identifying new feedbacks, *ASLO Summer Meeting*, Santiago de Compostella, Spain. (invité, Juin 2005)

L. Bopp, Physical / Chemical drivers in the ocean in a high CO₂ world, *The Ocean in a High CO₂ world, An international Symposium*, Paris, France (invité, Mai 2004).

L. Bopp, Interactions between climate change and the high-latitudes biogeochemical ocean through the CO₂ and DMS cycles, *Gordon Research Conference on Polar Marine Sciences*, Ventura, Etats-Unis (invité, Mars 2003).