# Dr. Valier Galy (he/him)

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| **Biogeochemist**Tenured Associate Scientist at *Woods Hole Oceanographic Institution* |

# Education

**2007 Ph.D** (Centre de Recherche Pétrographiques et Géochimiques, Nancy, France) - Title: Organic carbon export and burial during continental erosion: the Himalayan system - Advisors: Dr. Christian France-Lanord and Dr. Pierre Faure.

**2003 Masters degree in Geochemistry** – (Nancy, France) – Thesis title: Organic carbon isotopic composition of Bengal fan sediments (DSDP Leg 22 Site 218) - Advisor: Dr. Christian France-Lanord - With Honors.

**2003 Masters degree in Geological Engineering** - Ecole Nationale Supérieure de Géologie (Nancy, France).

**1998 Scientific baccalaureate**. *High School Diploma.* (Muret, France). With Honors.

# Professional Experience

**Since 6/2018 Associate Scientist with tenure**,Department of Marine Chemistry and Geochemistry*, Woods Hole Oceanographic Institution, USA*.

**2015-2018 Associate Scientist**,Department of Marine Chemistry and Geochemistry*, Woods Hole Oceanographic Institution, USA*.

**2010-2015 Assistant Scientist**,Department of Marine Chemistry and Geochemistry*, Woods Hole Oceanographic Institution, USA*.

**2007-2010 Postdoctoral scholar/investigator**,*Woods Hole Oceanographic Institution*. Advisors: Dr. Timothy Eglinton and Dr. Bernhard Peucker-Ehrenbrink

# Awards

**2007** Woods Hole Oceanographic Institution Postdoctoral Scholarship.

**2007** Caltech Postdoctoral Scholarship (declined).

**2007** Dissertation Award of the Institut National Polytechnique de Lorraine, France.

# Professional Affiliations

**Since 2005** American Geophysical Union, Geochemical Society.

# Research Interests

I seek to understand how biogeochemical processes influence the composition of the atmosphere (CO2 and O2 concentrations) over a range of timescales from decades to millions of years, thereby regulating Earth’s climate and affecting the evolution of life.

My group is actively conducting research on:

* Fluvial transfer of organic carbon from continental reservoirs to the ocean.
* Carbon cycling in the Critical Zone.
* Impact of climate change on the dynamics of organic carbon cycling.
* Deep biosphere, role of microbial communities in sedimentary systems.
* Relationships between erosion, tectonics and climate over geologic timescales.
* Radiocarbon dating (compound specific, ramped pyrolysis/oxidation), new dating techniques.
* Developing paleo-climate proxies, e.g. compound specific stable isotope measurements.

# Professional activities at WHOI

**2017** Member of the Search Committee, Department of Marine Chemistry and Geochemistry

**2016** Panelist for the Independent Study Award.

**2016** Organization of a workshop hosted by NOSAMS on Ramped Pyrolysis/Oxidation radiocarbon dating.

**2012** Participated in the first WHOI “climate retreat”.

**Since 2010** Active member of the Global River Observatory.

# Leadership and National Service

**2020-2021** Ocean Discovery Lecture Series – Distinguished Lecturer

**2014** Panelist for the National Science Foundation.

**Since 2013** Associate editor of Earth Surface Dynamics, open access journal of the EGU published by Copernicus.

**Since 2012** Organized and chaired 3 sessions at Goldschmidt Conference (2012-2013-2014) and 1 session at AGU fall meeting (2016).

**2012** Participated in the “IODP building US strategies for 2013-2023 scientific drilling” meeting (Denver, CO).

**Since 2007** Reviewer for Biogeosciences, Chemical Geology, EPSL, French ANR, GBC, GCA, Geology, G3, Geochemical Journal, GPC, GRL, Helmholtz Association, L&O, Marine Environmental Research, Marine Geology, Nature, Nature Geosciences, Nature Communications, NERC, NOW, Organic Geochemistry, PNAS, Quaternary Geochronology, QSR, Rapid communications in Mass Spectrometry, Science, Science Advances, Scientific Reports, Soil Biology and Biochemistry, Swiss NSF, Terra Nova, US NSF.

# Participation in Education Programs

**2020** MIT-WHOI Joint Program. Graduate level course: Geodynamics Seminar Series. Co-taught with A. Dunlea, B. Peucker-Ehrenbrink and T. Horner.

**2019** MIT-WHOI Joint Program. Graduate level course: Marine Isotope Geochemistry*.* Co-taught on odd years with B. Peucker-Ehrenbrink, S. Wankel and T. Horner.

**Since 2019** MIT-WHOI Joint Program. Graduate level course: Marine Chemistry Seminar: Hot Topics*.* Co-taught on odd years with C. Ward.

**Since 2018** MIT-WHOI Joint Program. Graduate level course: Marine Organic Geochemistry*.* Co-taught on even years with D. Repeta.

**2016-2017** MIT-WHOI Joint Program: advisor to the 2016 Chemical Oceanography incoming students.

**2010 - present** MIT-WHOI Joint Program: member of 2 thesis committees, chair of 1 thesis defense.

**2005-2006** Ecole Nationale Supérieure de Géologie de Nancy (ENSG), second year - 4h lecture: Climatic evolution of the Earth.

**2005-2006** Teaching Assistant - Ecole Nationale Supérieure de Géologie de Nancy (ENSG), second year - 24h of classes: General geochemistry (Pr. B. Marty).

**2005-2006** University Henry Pointcarré, Nancy I, candidate to the High School teacher competitive exam. 4h lecture: The global carbon cycle and the Neoproterozoic glaciations.

**2004-2005** Teaching Assistant - Ecole Nationale Supérieure de Géologie de Nancy (ENSG), second year - 24h of classes: General geochemistry (Pr. B. Marty).

**2004-2005**Institut National Polytechnique de Loraine (INPL) - 4h lecture: Interactions between tectonic, erosion and climate.

# Supervision at WHOI

**Since 2012** Research Specialist C. Johnson.

**2011 - 2013** Research Assistant X. Philippon (now at IFREMER, France).

# Mentoring at WHOI

**Postdoctoral scientists (10):** M. Colombo (current),Y. Yan (2018-2019), W. Longo (2017-2018; Now Visiting Assistant Professor at Macalester College), L. Childress (2016-2017; Now IODP Expedition Project Manager; TAMU), K. French, Agouron GeobiologyPostdoctoral Fellow (2015-2016; Now Research Scientist at USGS), W. Orsi (2015; Now Professor at LMU Munich, Germany), K. Brown (2014-2017; Now Postdoctoral Research Scientist at UBC), G. Soulet (2013-2015; now Postdoctoral Fellow at Durham University), N. Dubois (2012-2013; now group leader at EAWAG, Switzerland), C. Hein (2011-2013; now Associate professor at VIMS)

**MIT-WHOI Joint Program graduate students (4):** B. Boehman (current),J. Hemingway (2011-2016; now Asistant Professor at ETH Zurich), S. Rosengard (2012-2016; now Assistant Professor at the School of the Art Institute of Chicago) K. Fornace (2012-2015; now chemist at South Coast AQMD)

**Visiting graduate students:** C. Dalzell (Saint Mary’s University, Halifax, Canada), L. Weimerskirch (CPE, Lyon, France), J. Rogers (Florida State University),S. Nirzam (Indian Institute of Technology in Kanpur, India), Y. Zang (Ocean University of China), S. Hage (National Oceanography Center, Southampton),H. Lee (University of Southern California), M.S. Wu (University of Southern California),G. Li(University of Southern California), X. Cui (University of Florida), T. Rigaudier (CRPG Nancy, France), K. Grant (Cornell University), G. Morin (CRPG Nancy, France), M. Bollard (ENSG, France) S. Agrawal (Indian Institute of Technology in Kharagpur, India)

**Undergraduate students:** C. Xu (High School Student, Falmouth, MA),A. Borsook (University of Southern California),Summer Student Fellow H. Pryer, PEP (Partnership in Education Program) student S. Karim, Gabrielle Melo Fernandez (Brazil’s Science without border program), Andrew Gorin, M. Razu (Dhaka University, Bangladesh), PEP student S. Riley, Summer Student Fellow S. Pattel

# Fieldwork and Cruises

2016 Mekong River (Laos & Thailand) – 1 week.

2015 IODP Expedition 354 “Bengal Fan” – 8 weeks.

2014 Amazon River (Brazil) – 1 week.

2013 Madre de Dios River (Amazon River basin, Peru) – 2 weeks.

2011-2012Time series sampling of 4 rivers draining into Narragansett Bay (US).

2011 **Team leader**: Mackenzie River (Northwest Territories, Canada) – 2 weeks.

2011 **Team leader**: Ganges-Brahmaputra river system (Nepal and Bangladesh) - 2 weeks.

2010 **Team leader**:Ganges-Brahmaputra river system (Nepal and Bangladesh) - 3 weeks.

2010 **Team leader**: Mackenzie River (Northwest Territories, Canada) – 2 weeks.

2009 **Team leader**:Mackenzie River (Northwest Territories, Canada) – 2 weeks.

2009Mackenzie River Delta (Northwest Territories, Canada) – 2 weeks.

2008Ganges-Brahmaputra river system (Bangladesh) - 2 weeks.

2007 **Team leader**: Ganges-Brahmaputra river system (Nepal and Bangladesh) - 3 weeks.

2005 Ganges-Brahmaputra river system (Nepal and Bangladesh) - 4 weeks.

2004 Ganges-Brahmaputra river system (Nepal and Bangladesh) - 5 weeks.

2004 Ganges-Brahmaputra river system (India) - 2 weeks.

# Manuscripts in review - \* students and postdocs

[77] Y. Zhang**\***, **V. Galy**, M. Yu, H. Zhang, M. Zhao - Terrestrial organic carbon age and reactivity in the Yellow River fuelling efficient preservation in marine sediments. *Earth and Planetary Science Letters*, in review.

[76] C. Johnson, **V. Galy** - Actively Helium Flushed Sheathed Reactor for Continuous Flow Oxygen Stable Isotope Compound Specific Analysis. *Rapid Communications in Mass Spectrometry*, in review.

[75] U. Hanke, A. Gagnon, C. Reddy, M. Lardie Gaylord, A. Cruz, V. Galy, R. Hansman, M. Kurz - Sequential thermal analysis of complex organic mixtures: procedural standards and improved CO2 purification capacity. *Radiocarbon*, in review.

[74] K. Grant**\***, **V. Galy**, N. Haghipour, T. Eglinton, L. Derry – Persistence of old soil carbon under changing climate: the role of mineral-carbon interactions. *Chemical Geology*, in review.

[73] G. Soulet**\***, L. Giosan, G. Bayon, S. Toucanne, P. Nonnotte, G. Lericolais, T. Croissant, **V. Galy** – Black Sea reconnection triggered by the drainage of Lake Agassiz-Ojibway 8200 years ago. *Geology*, in review.

# Peer reviewed publications - \* advised or co-advised students and postdocs, # co-first authors

[72] X. Du, J. Russell, Z. Liu, B. Otto-Bliesner, Y. Gao, C. Zhu, D. Oppo, M. Mohtadi, Y. Yan\*, **V. Galy** (2021) - Deglacial trends in Indo-Pacific Warm Pool hydroclimate in an isotope-enabled Earth system model and implications for isotope-based paleoclimate reconstructions. *Quaternary Science Reviews*, in press.

[71] J. A. Rogers, **V. Galy**, A. M. Kellerman, J. P. Chanton, N. Zimov, R. G. M. Spencer (2021) – Ramped Oxidation Reveals Limited Influence of Permafrost Dissolved Organic Matter in the Kolyma River, Siberia. *Journal of Geophysical Research – Biogeosciences*, in press.

[70] S. Kusch, G. Mollenhauer, C. Willmes, J. Hefter, T. I. Eglinton, **V. Galy** (2021) - Controls on the age of plant waxes in marine sediments – a global synthesis. *Organic Geochemistry, Invited Review Article*, in press.

[69] S. Boral, B. Peucker-Ehrenbrink, J. Hemingway, I. Sen, **V. Galy**, G. Fiske (2021) - Controls on short-term dissolved 87Sr/86Sr variations in large rivers: Evidence from the Ganga-Brahmaputra. *Earth and Planetary Science Letters*, in press.

[68] G. Li, W. Fischer, M. Lamb, A. J. West, T. Zhang, **V. Galy**, X. T. Wang, S. Li, G. Li , L. Zhao, J. Ji (2021) – Coal fly ash is a major carbon flux in the Changjiang (Yangtze) River basin. *Proceedings of the National Academy of Science,* v118, 1-8.

[67] T. Drake, J. Hemingway, M. Kurek, B. Peucker-Ehrenbrink, R., M. Holmes, **V. Galy**, J. Moura, M. Mitsuya, L. Wassenaar, J. Six, R. G. M. Spencer (2021) - The Pulse of the Amazon: Fluxes of dissolved organic carbon, nutrients, and ions from the world’s largest river. *Global Biogeochemical Cycles*, v35, 1-25.

[66] T. Eglinton**#**, **V. Galy#**, J. Hemingway\*, X. Feng, H. Bao, T. M. Blattmann, A.F. Dickens, H. Gies, L. Giosan, N. Haghipour, P. Hou, M. Lupker, C. P. McIntyre, D. B. Montlucon, B. Peucker-Ehrenbrink, C. Ponton, E. Schefuß, M. S. Schwab, B. Voss, L. Wacker, Y. Wu, M. Zhao (2021) – Climate controls on terrestrial biospheric carbon turnover. *Proceedings of the National Academy of Science*, v118, 1-9.

[65] A. D. Steen, S. Kusch, H. Abdulla, N. Cakić, S. Coffinet, T. Dittmar, J. Fulton, **V. Galy**, K.-U. Hinrichs, A. Ingalls, B. Koch, E. Kujawinski, Z. Liu, H. Osterholz, D. Rush, M. Seidel, J. Sepúlveda, S. G. Wakeham (2020) - Analytical and computational advances, opportunities, and challenges in marine organic biogeochemistry in an era of “omics”. *Frontiers in Marine Science*, Review Article, v7, 718.

[64] S. Nizam\*, I.S. Sen, V. Vinoj, **V. Galy**, D. Selby, M.F. Azam, S.K. Pandey, R.A. Creaser, A.K. Agarwal, A.P. Singh, M. Bizimis (2020) – Himalayan glaciers melting insensitive to fossil fuel combustion residues. *Environmental Science and Technology*, v54. **Cover of v54 issue 14.**

[63] S. Wagner, F. Schubotz, K. Kaiser, C. Hallmann, H. Waska, P. Rossel, R. Hansman, M. Elvert, J. Middelburg, A. Engel, T. Blattmann, T. Catalá, S. Lennartz, G. Gomez-Saez, S. Pantoja-Gutiérrez, R. Bao and **V. Galy** (2020) - Soothsaying DOM: A current perspective on the future of oceanic dissolved organic carbon. *Frontiers in Marine Science*, Review Article, v7, 341.

[62] S. Hage\*, **V. Galy**, M. Cartigny, S. Acikalin, M Clare, D. Gröcke, R. Hilton, J. Hunt, D. Lintern, C. McGhee, D. Parsons, C. Stacey, E. Sumner, P. Talling (2020) – Efficient preservation of young terrestrial organic carbon by submarine turbidity currents. *Geology*, v48, 882.

[61] S. J. Feakins, H. Liddy, L. Tauxe, **V. Galy**, X. Feng, J. Tierney, Y. Miao, S. Warny (2020) – Miocene C4 grassland expansion as recorded by the Indus Fan. *Paleoceanography and Paleoclimatology*, v35,.

[60] C. Hein**\***, M. Usman, T. Eglinton, N. Haghipour, **V. Galy** (2020) – Millennial-scale hydroclimate control of tropical soil carbon storage. *Nature*, v581, 63-66.

[59] F. Kirkels, C. Ponton, **V. Galy**, A. J. West, S. Feakins, F. Peterse (2020) – From Andes to Amazon: assessing branched tetraether lipids as tracers for soil Organic Carbon in the Madre de Dios River system. *Journal of Geophysical Research – Biogeosciences*, v125, 1-18.

[58] H. Lee**\***, **V. Galy**, X. Feng, C. Ponton, A. Galy, C. France-Lanord, S. Feakins (2019) – Sustained wood burial in the Bengal Fan over the last 19 million years. *Proceedings of the National Academy of Science*, v116, 22518-22525.

[57] U. Hanke, A. Lima-Braun, T. Eglinton, J. Donnelly, **V. Galy**, P. Poussart, K. Hughen, A. Mcnichol, L. Xu, C. Reddy (2019) – Significance of perylene for source allocation of terrigenous organic matter in aquatic sediments. *Environmental Science and Technology*, v53, 8244-8251.

[56] K. Grant**\***, **V. Galy**, O. Chadwick, L. Derry (2019) - Thermal oxidation of carbon in organic matter rich volcanic soils: insights into SOC age differentiation and mineral stabilization. *Biogeochemistry*, v144, 291-304.

[55] J. Hemingway**\***, D. Rothman, K. Grant, S. Rosengard**\***, T. Eglinton, L. Derry, **V. Galy** (2019) – Mineral protection regulates the global preservation of natural organic carbon. *Nature*, v570, 228-231.

[54] K. Horran, R. Hilton, M. Dellinger, E. Tipper, **V. Galy**, D. Calmels, D. Selby, J. Gaillardet, C. Ottley, D. Parsons, K. Burton (2019) – Carbon dioxide emissions by rock organic carbon oxidation and the net geochemical carbon budget of the Mackenzie River Basin. *American Journal of Science*, v319, 473-499.

[53] R. Bao, M. Zhao, A. McNichol, **V. Galy**, N. Haghipour, C. McIntyre, T. Eglinton (2019) - Temporal constraints on lateral transport and degradation of organic carbon on continental shelves. *Organic Geochemistry*, v 128, 86-93.

[52] J. Hemingway**\***, R. Spencer, D. Podgorski, P. Zito, I. Sen, **V. Galy** (2019) - Glacier meltwater and monsoon precipitation drive dissolved organic matter composition in Himalayan rivers. *Geochimica and Cosmochimica Acta*, v 244, 216-228.

[51] G. Soulet**\***, L. Giosan, C. Faux, **V. Galy** (2019) - Using stable carbon isotopes to quantify radiocarbon reservoir age offsets in the Black Sea. *Radiocarbon*, v 61, p309-318.

[50] L. Giosan, W. D. Orsi, M. Coolen, C. Wuchter, A.G. Dunlea, K. Thirumalai, S. E Munoz, P.D. Clift, J.P. Donnelly, **V. Galy**, D.Q. Fuller (2018) – Neoglacial Climate Anomalies and the Harappan Metamorphosis. *Climate of the Past*, v 14, 1669-1686.

[49] S. Feakins, M. Wu, C. Ponton, **V. Galy**, A.J. West (2018) – Dual isotope evidence for uniform sedimentary integration of plant wax biomarkers across an Andes-Amazon elevation transect. *Geochimica and Cosmochimica Acta*, v 242, 64-81.

[48] K. French**\***, C. Hein**\***, N. Haghipour, L. Wacker, H. Kudrass, T. Eglinton, **V. Galy** (2018) - Timescales of terrestrial organic carbon export to the Bengal Fan. *Scientific Reports*, v 8, 11997.

[47] K. More, W. Orsi, **V. Galy**, L. Giosan, K. Grice, M. Coolen (2018) - A 52 kyr record of protist - oxygen minimum zone interactions in the Arabian Sea. *Earth and Planetary Science Letters*, v 496, 248-256.

[46] A. Coppola, D. Wiedemeier, **V. Galy**, U. Hanke, N. Haghipour, G. Nascimento, M. Usman, T. Blattmann, M. Reisser, C. Freymond, M. Zhao, B. Voss, E. Schefuß, L. Wacker, B. Peucker-Ehrenbrink, S. Abiven, M. Schmidt, T. Eglinton (2018) - Global Scale Fluvial Export of Persistent Particulate Black Carbon. *Nature Geoscience*, v 11, p584-588.

[45] J. Hemingway**\***, R. Hilton, N. Hovius, T. Eglinton, N. Haghipour, L. Wacker, M.-C. Chen, **V. Galy** (2018) - Rapid microbial oxidation of rock-derived organic carbon in mountain soils. *Science*, v 360, p209-212.

[44] S. Rosengard**\***, P. Lam, A. McNichol, C. Johnson, **V. Galy** (2018) - The effect of sample drying temperature on marine particulate organic carbon composition. *L&O methods*, v 16, p286-298.

[43] T. Bianchi, X. Cui, N. Blair, D. Burdige, T. Eglinton, **V. Galy** (2018) – Centers of Action of Organic Carbon Burial and Oxidation at the Land-Ocean Interface. *Organic Geochemistry*, v 115, p138-155. *Invited Review Article*.

[42] J. Hemingway**\***, D. Rothman, S. Rosengard**\***, **V. Galy** (2017)– An inverse method to relate organic carbon reactivity to isotope composition from serial oxidation. *Biogeosciences*, v 14, p5099-5114.

[41] L. Giosan, C. Ponton, M. Usman, J. Blusztajn, D. Fuller, **V. Galy**, N. Haghipour, J. Johnson, C. McIntyre, L. Wacker, T. Eglinton (2017) - Massive Erosion in Monsoonal Central India Linked to Late Holocene Landcover Degradation. *Earth Surface Dynamics*, v 5, p781-789.

[40] C. Hein**\***, A. Galy, C. France-Lanord, H. Kudrass, T. Schwenk, **V. Galy** (2017) – Post-Glacial Climate Forcing of Surface Processes in the Ganges-Brahmaputra River Basin and Implications for Carbon Sequestration. *EPSL*, v 478, p89-101.

[39] W. Orsi**\***, M. Coolen, L. He, C. Wuchter, X. Irigoien, G. Chust, C. Johnson, J. Hemingway**\***, M. Lee**\***, **V. Galy** and L. Giosan (2017) –Climate oscillations reflected within the microbiome of Arabian Sea sediments. *Scientific Reports*, v 7, 6040.

[38] J. Hemingway**\***, E. Schefuß, R. Spencer, B. Dinga, T. Eglinton, C. McIntyre, **V. Galy** (2017)- Hydrologic controls on the seasonal and inter-annual variability of Congo River particulate organic carbon sources and reservoir age. *Chemical Geology*, v 466, p454-465.

[37] J. Hemingway**\***, **V. Galy**, A. Gagnon, K. Grant, S. Rosengard**\***, G. Soulet**\***, P. Zigah, A. McNichol(2017)- Assessing the blank carbon contribution, isotope mass balance, and kinetic isotope fractionation of the ramped pyrolysis/oxidation instrument at NOSAMS. *Radiocarbon*, v 59, p179-193.

[36] J. Vonk, A. Dickens, L. Giosan, S. Zipper, **V. Galy**, R. M. Holmes, D. Montlucon, B. Kim, Z. Hussain, T. Eglinton (2016) - Arctic deltaic lake sediments as recorders of fluvial organic matter deposition. *Frontiers in Earth Science*, v 4, p1-24.

[35] M. Torres, A. J. West, K. Clark, G. Paris, J. Bouchez, C. Ponton, S. Feakins, **V. Galy**, J. Adkins (2016) - The acid and alkalinity budgets of weathering in the Andes-Amazon system: insights into the erosional control of global biogeochemical cycles? *EPSL*, v 350, p381-391.

[34] X. Feng, S. J. Feakins, Z. Liu, C. Ponton, R. Z. Wang, E. Karkabi**\***, **V. Galy**, W. M. Berelson, A. Nottingham, P. Meir, A. J. West (2016) - Source to sink: Evolution of lignin composition in the Madre de Dios River system with connection to the Amazon basin and offshore fan. *Journal of Geophysical Research*, v 121, p1-23.

[33] J. Hemingway**\***, E. Schefuß, B. Dinga, H. Pryer**\***, **V. Galy** (2016) - Multiple plant-wax compounds record differential sources and ecosystem structure in large river catchments. *GCA*, v 184, p20-40.

[32] K. Fornace**\***, B. Whitney, **V. Galy**, K. Hughen, F. Mayle (2016) – Late Quaternary environmental change in the interior South American tropics: new insight from leaf wax stable isotopes. *EPSL*, v 438, p75-85.

[31] G. Soulet**\***, L. Skinner, S. Beaupre, **V. Galy** (2016) – A note on reporting of reservoir 14C disequilibria and 14C age offsets. *Radiocarbon*, v 58, p205-211.

[30] T. Bianchi, **V. Galy**, B. Rosenheim, M. Shields, X. Cui, P. Van Metre (2015) – Paleoreconstruction of Organic Carbon Inputs to an Oxbow Lake in the Mississippi River Watershed: Effects of Dam Construction and Land-Use Change on Regional Inputs. *Geophysical Research Letters*, v 42, p7983-7991.

[29] B. Voss et al. (including **V. Galy**) (2015) – Seasonal hydrology drives rapid shifts in the flux and composition of dissolved and particulate organic carbon and mercury in the Fraser River, Canada. *Biogeosciences*, v 12, p5597-5618.

[28] R. Hilton, **V. Galy**, J. Gaillardet, M. Dellinger, C. Bryant, D. Gröcke, J. Bouchez, D. Calmels (2015) - Erosion in the Arctic as a geological carbon dioxide sink. *Nature*, v 524, p84-87.

[27] **V. Galy**, B. Peucker-Ehrenbrink, T. Eglinton (2015) – Global export of carbon from the terrestrial biosphere controlled by erosion. *Nature*, v 521, p204-207.

[26] R. W. Smith, T. S. Bianchi, M. Allison, C. Savage, **V. Galy** (2015) – High rates of organic carbon burial in fjord sediments globally. *Nature Geoscience*, v 8, p450-453. **Cover of the June 2015 issue.**

[25] C. Ponton, A. J. West, S. J. Feakins, **V. Galy** (2014) - Leaf wax biomarkers in transit record river catchment composition. *Geophysical Research Letters*, v 41.

[24] M. Dellinger, J. Gaillardet, J. Bouchez, D. Calmels, **V. Galy**, R.G. Hilton, P. Louvat, C. France-Lanord (2014) - Lithium isotopes reveal the cannibalistic nature of modern continental erosion. *EPSL*, v 401, p359-372.

[23] N. Dubois**\***, D. Oppo, **V. Galy**, M. Mohtadi, S. Van der Kaars, J. Tierney, Y. Rosenthal, T. Eglinton, A. Lückge, B. Linsley (2014) Indonesian vegetation response to changes in rainfall seasonality over the past 25,000 years. *Nature Geoscience*, v 7, p513-518.

[22] J. Bouchez, **V. Galy**, R.G. Hilton, J. Gaillardet, P. Moreira-Turcq, M. Andrea Pérez, C. France-Lanord, L. Maurice (2014) - Source, transport, and fluxes of Amazon River particulate organic carbon: insights from river sediment depth-profiles. *Geochimica et Cosmochimica Acta*, v 133, p280-298.

[21] S. Agrawal**\***, **V. Galy**, P. Sanyal, T.I. Eglinton (2014) - C4 plant expansion in the Ganga Plain during the last glacial cycle: insights from isotopic composition of vascular plant biomarkers. *Organic Geochemistry*, v 67, p58-71.

[20] S. Schouten et al. (including **V. Galy**) (2013) - An interlaboratory study of TEX86 and BIT analysis of sediments, extracts and standard mixtures. *G-cubed*, v 14.

[19] S. R. Shah, D. R. Griffith, **V. Galy**, A. P. McNichol, T. I., Eglinton (2013) - Prominent bacterial heterotrophy and sources of 13C-depleted fatty acids to the interior Canada Basin. *Biogeosciences*, v 10, p7065-7080.

[18] P.-H. Blard, J. Lavé, F. Sylvestre, C. Placzek, C. Claude, **V. Galy**, T. Condom, B. Tibari (2013) - Cosmogenic 3He production rate in the tropical Andes (3800 m, 20°S): further evidences for synchronism between the Lake Tauca highstand and the local last glacial maximum – *EPSL*, v 377-378, p260-275.

[17] Lupker, M., C. France-Lanord, **V. Galy**, J. Lave, H. Kudrass (2013) Increasing chemical weathering in the Himalayan system since the Last Glacial Maximum - *EPSL*, v 365, p243-252.

[16] Rosenheim, B., **V. Galy** (2012) – Direct measurement of riverine particulate organic carbon age structure – *Geophysical Research Letters*, v 39.

[15] Lupker, M., C. France-Lanord, **V. Galy**, J. Lave, J. Gaillardet, A.P. Gajurel, C. Guilmette, M. Rahman, S.K. Singh, R. Sinha (2012) - Predominant floodplain over mountain weathering of Himalayan sediments (Ganga Basin) – *Geochimica et Cosmochimica Acta*, v 84, p410-432.

[14] **V. Galy**, T. Eglinton. (2011) - Protracted storage of biospheric organic carbon in the Ganges-Brahmaputra basin – *Nature Geoscience*, v 4, p843-847.

[13] Lupker, M., C. France-Lanord, J. Lavé, J. Bouchez, **V. Galy**, F. Métivier, J. Gaillardet, B. Lartiges, J.-L. Mugnier. (2011) - A Rouse-based method to integrate the chemical composition of river sediments: application to the Ganga basin – *Journal of Geophysical Research - Earth Surface*, v 116, p1-24.

[12] **V. Galy**, T. Eglinton, C. France-Lanord, S. Sylva. (2011) - The provenance of vegetation and environmental signatures encoded in vascular plant biomarkers carried by the Ganges-Brahmaputra rivers –*EPSL*, v 304, p1-12.

[11] E. Garzanti, S. Andò, C. France-Lanord, P. Censi, P. Vignola, **V. Galy**, M. Lupker. (2011) - Mineralogical and chemical variability of fluvial sediments, 2: Suspended-load silt (Ganga-Brahmaputra, Bangladesh) –*EPSL*, v 302, p107-120.

[10] E. Garzanti, S. Andò, C. France-Lanord, G. Vezzoli, P. Censi, **V. Galy**, Y. Najman. (2010) - Mineralogical and chemical variability of fluvial sediments, 1: Bedload sand (Ganga-Brahmaputra, Bangladesh) –*EPSL*, v 299, p368-381.

[9] P.D. Clift, L. Giosan, A. Carter, E. Garzanti, **V. Galy**, A.R. Tabrez, M. Pringle, I.H. Campbell, C. France-Lanord, J. Blusztajn, C. Allen, A. Alizai, A. Lückge, M. Danish, M.M. Rabbani. (2010) - Monsoon control over erosion patterns in the Western Himalaya: possible feed-backs into the tectonic evolution - *Geological Society of London, Special Publication*, v 342, p185-218.

[8] **V. Galy**, C. France-Lanord, B. Peucker-Ehrenbrink, P. Huyghe. (2010) - Sr-Nd-Os evidence for a stable erosion regime in the Himalaya during the past 12 Myr – *EPSL*, v 290, p474-480.

[7] J. Bouchez, O. Beyssac, **V. Galy**, J. Gaillardet, C. France-Lanord. (2010) - Oxidation of rock-derived organic carbon in the Amazon floodplain as a source of atmospheric CO2 - *Geology*, v 38, p255-258.

[6] **V. Galy**, O. Beyssac, C. France-Lanord, T. Eglinton. (2008) - Recycling of graphite during Himalayan erosion: a geological stabilisation of C in the crust - *Science*, v 322, p943-945.

[5] **V. Galy**, L. François, C. France-Lanord, P. Faure, H. Kudrass, F. Palhol, S. Singh. (2008) - C4 plants decline in the Himalayan basin since the Last Glacial Maximum - *Quaternary Science Reviews*, v 27, p1396-1409.

[4] **V. Galy**, C. France-Lanord, B. Lartiges. (2008) - Loading and fate of particulate organic carbon from the Himalaya to the Ganga-Brahmaputra delta - *Geochimica et Cosmochimica Acta*, v 72, p1767-1787.

[3] **V. Galy**, C. France-Lanord, O. Beyssac, P. Faure, H. Kudrass, F. Palhol. (2007) - Efficient organic carbon burial in the Bengal fan sustained by the Himalayan erosional system - *Nature*, v 450, p407-410.

[2] **V. Galy**, J. Bouchez, C. France-Lanord. (2007) - Determination of total organic carbon content and δ13C in carbonate rich detrital sediments - *Geostandards and Geoanalytical Research*, v 31, 3, p199-207.

[1] F. Chabaux, M. Granet, E. Pelt, C. France-Lanord, **V. Galy**. (2006) - 238U-234U-230Th disequilibria and timescale of sedimentary transfers in rivers: clues from the Gangetic plain rivers - *Journal of Geochemical Exploration*, v 88, p373-375.

# Book chapters and other publications

A. McNichol, B. Rosenheim, **V. Galy** (2017) - Turning Up the Heat on Organic Matter to Read Carbon’s History. *EOS*, v 98.

C. France-Lanord, V. Spiess, A. Klaus, T. Schwenk, and the Expedition 354 Scientists (including **V. Galy**) (2016). *Bengal Fan*. Proceedings of the International Ocean Discovery Program, 354: College Station, TX (International Ocean Discovery Program).

**V. Galy**, C. Hein\*, C. France-Lanord, T.I. Eglinton (2013) - The evolution of carbon signatures carried by the Ganges-Brahmaputra River system: A source-to-sink perspective – in “Biogeochemical Dynamics at Large River-Coastal Interfaces: Linkages with Global Climate Change”. Editors: T. S. Bianchi, M. A. Allison, W.-J. Cai. Cambridge University Press.

**V. Galy**, C. France-Lanord, O. Beyssac, B. Lartiges, M. Rahman. (2011) - Organic carbon cycling during Himalayan erosion: processes, fluxes and consequences for the global carbon cycle - In: R. Lal et al. (Eds), Climate Change and Food Security in South Asia (Springer).

# Invited Communications (>40)

V. Galy - Variations of the Indian summer monsoon over the Mio-Pliocene recorded in the Bengal Fan – **Monsoon Seminar Series** (online).May 19th 2021. https://www.youtube.com/watch?v=8G5w9eMyNU8

V. Galy - The chilling effect of mountain growth: new Cenozoic perspectives from the Bengal Fan – Ocean Discovery Lecture Series: **Northern Illinois University; Syracuse University; University of Utah; West Virginia University; Louisiana State University.** Spring 2021.

V. Galy et al. - Climate controls on terrestrial biospheric carbon turnover – **Florida State University**, September 2020.

V. Galy et al. – Revisiting the Reactivity of Terrestrial Organic Matter Along the Land-Sea Continuum: implications for global C budgets – **University of Southern Florida**, St Petersburg, FL, February 28th 2020.

V. Galy - The chilling effect of mountain growth: new Cenozoic perspectives from the Bengal Fan – **University of Colorado**, Boulder, CO, November 6th 2019.

V. Galy – Revisiting the Reactivity of Terrestrial Organic Matter Along the Land-Sea Continuum: implications for global C budgets – **Marine Biogeochemistry Workshop**, Delmenhorst, Germany, April 27th 2019.

V. Galy – Revisiting the Reactivity of Terrestrial Organic Matter Along the Land-Sea Continuum: implications for global C budgets – **Lamont-Doherty Earth Observatory**, Columbia University, NY, February 22nd 2019.

V. Galy et al. – Revisiting the Reactivity of Terrestrial Organic Matter Along the Land-Sea Continuum – **AGU Fall meeting**, Washington DC (USA), 2018.

V. Galy et al. – A global perspective on organic carbon storage, mobilization and export from river catchments – **International Workshop on Organic Carbon Cycling in Marine Environments: Estuarine to Open Ocean Systems**, Ocean University China, Qingdao, China, October 13-16th 2018.

V. Galy et al. - Climate forcing of the terrestrial organic carbon cycle during the last deglaciation: the Himalaya-Bengal fan example – **Durham University**, UK, January 25th 2018.

V. Galy et al. - Climate forcing of the terrestrial organic carbon cycle during the last deglaciation: the Himalaya-Bengal fan example – **Lamont-Doherty Earth Observatory**, Columbia University, NY, October 16th 2017.

V. Galy et al. - Climate forcing of the terrestrial organic carbon cycle during the last deglaciation: the Himalaya-Bengal fan example – **Cornell University**, Ithaca, NY, September 6th 2017.

V. Galy et al. - Variations of the Indian summer monsoon over the Mio-Pliocene recorded in the Bengal Fan (IODP Exp354): implications for the evolution of the terrestrial biosphere. – **IODP workshop: Land-Ocean Interactions Across the Indian Ocean**, Narragansett (US), 10-12 July 2017.

V. Galy - Dynamics of organic carbon cycling along the land-ocean continuum – **Ecole Polytechnique Française de Lausanne**, Lausanne (Switzerland), June 20th 2017.

V. Galy et al. - Variations of the Indian summer monsoon over the Mio-Pliocene recorded in the Bengal Fan (IODP Exp354): implications for the evolution of the terrestrial biosphere. – **EGU meeting**, Vienna (Austria), 24-28 April 2017.

V. Galy et al. - Climate forcing of the terrestrial organic carbon cycle during the last deglaciation: the Himalaya-Bengal fan example – **Ocean University China**, Qingdao, China, October 19th 2016.

# V. Galy et al. - Dynamics of organic carbon cycling along the land-ocean continuum: insights from novel applications of radiocarbon dating – Tongji University, Shanghai, China, October 13th 2016.

# V. Galy et al.- A global perspective on riverine export of terrestrial organic carbon to the ocean – Tongji University, Shanghai, China, October 13th 2016.

# V. Galy - Dynamics of organic carbon cycling along the land-ocean continuum: insights from novel applications of radiocarbon dating – University of Stockholm, Stockholm, Sweden, May 3rd 2016.

# V. Galy et al. - Timescales of plant wax storage and transport in river systems: what’s in an age? – Plant Waxes from Biosynthesis to Burial, Ascona (Switzerland), June 15th-19th 2015.

# V. Galy et al.- Climate forcing of the terrestrial organic carbon cycle during the last deglaciation: the Himalaya-Bengal fan example – AGU Fall meeting, San Francisco, CA, December 15th-19th 2014.

# V. Galy et al.- A global perspective on riverine export of terrestrial organic carbon to the ocean – AGU Fall meeting, San Francisco, CA, December 15th-19th 2014.

# V. Galy - A global perspective on riverine export of terrestrial organic carbon to the ocean: climatic or geomorphic forcing? – University of Florida, Gainesville, FL, November 6th 2014.

# V. Galy - A global perspective on riverine export of terrestrial organic carbon to the ocean: climatic or geomorphic forcing? – University of Colorado, Boulder, CO, January 29th 2014.

# V. Galy et al.- Erosion controls the global export of carbon from the terrestrial biosphere – ASLO Aquatic Sciences meeting, New Orleans, LO, February 17th-22nd 2013.

# V. Galy et al.- Erosion controls the global export of carbon from the terrestrial biosphere – AGU Fall meeting, San Francisco, CA, December 3rd-7th 2012.

# V. Galy et al.- Towards a global understanding of the dynamics of terrestrial OC transfer to the ocean – University of Connecticut at Avery point, Groton, Ct - November 16th 2012.

# V. Galy et al.- Dynamics of fluvial release or terrestrial OC: what role for climate? – 5th International Workshop on Soil and Sedimentary Organic Matter Stabilization and Destabilization, Ascona, Switzerland – October 7-11 2012.

# V. Galy et al.- Towards a global understanding of the dynamics of terrestrial OC transfer to the ocean – University of Southern California, Los Angeles, Ca, October 3rd 2012.

# V. Galy, B. Peucker-Ehrenbrink, T. Eglinton - Towards a global understanding of the dynamics of terrestrial OC transfer to the ocean – Gordon Research Conference on organic geochemistry, Holderness, NH, July 29th – August 3rd 2012.

# V. Galy et al. - Dynamics of particulate organic carbon transfer to the ocean: a source to sink perspective – Ocean Carbon Biogeochemistry workshop, Woods Hole, MA, 16-19 July 2012.

# V. Galy et al. - Source-to-sink dynamics of organic carbon transfer to the ocean: towards a global perspective – Texas A&M University, College Station, TX, 14 November 2011.

V. Galy et al. - Source-to-sink dynamics of organic carbon transfer to the ocean: towards a global perspective – **Cornell University**, Ithaca, NY, 26 October 2011.

V. Galy et al. - Isotopic anatomy of the Ganges-Brahmaputra river system: insights into the dynamic of terrestrial organic carbon cycling – **ETH**, Zurich, 12 May 2010.

V. Galy, et al. - Exploring the provenance of vegetation and environmental signatures encoded in vascular plant biomarkers carried by the Ganges-Brahmaputra rivers – **EGU meeting**, Vienna (Austria), 3-7 May 2010.

V. Galy, T. Eglinton, B. Peucker-Ehrenbrink, C. France-Lanord, O. Beyssac, H. Kudrass - Export and Burial of Organic Carbon in the Himalayan System: a new look at the short and long-term C cycles – **University of Colorado**, **Boulder**, CO, 09 December 2009.

V. Galy - Export and Burial of Organic Carbon in the Himalayan System: a new look at the long-term C cycle - **GEOTOP** (University of Quebec in Montréal), Montréal (Canada), 08 January 2009.

V. Galy, C. France-Lanord, O. Beyssac, H. Kudrass, T. Eglinton, B. Peucker-Ehrenbrink - Export and Burial of Organic Carbon in the Himalayan System: a new look at the long-term C cycle - **Tulane University**, New Orleans (USA), 24 October 2008.

V. Galy, C. France-Lanord, O. Beyssac, H. Kudrass, T. Eglinton, B. Peucker-Ehrenbrink - Export and Burial of Organic Carbon in the Himalayan System: a new look at the long-term C cycle - **Laboratoire des Sciences du Climat et de l'Environement** (LSCE), Gif/Yvette (France), 17 July 2008.

V. Galy, C. France-Lanord, A. Galy, J. Gaillardet - Anthropogenic Increase Of Soil Erosion In The Gangetic Plain Revealed By Geochemical Budget Of Erosion - **AGU Fall meeting**, San Francisco (USA), 10-14 December 2007.

# Other Communications (> 100)

V. Galy et al. - Climate controls on terrestrial biospheric carbon turnover - **Goldschmidt conference**, June 2020.

V. Galy et al. – Organic carbon burial in the Bengal Fan over the last 20 Myrs – **Chapman** conference on Evolution of the Monsoon, Biosphere and Mountain Building in Cenozoic Asia, Washington DC, January 2020.

V. Galy et al. - Radiocarbon analysis strategies for elucidation of carbon cycle processes – INSTAAR, Boulder, USA, 2019.

V. Galy et al. – Accelerated turnover of soil C in response to post-glacial monsoon strengthening – **AGU Fall meeting**, San Francisco (USA), 2019.

V. Galy et al. - Mio-Pliocene variations of the Indian monsoon recorded in the Bengal Fan (IODP Exp354) – **AGU Fall meeting**, Washington DC (USA), 2018.

T. Eglinton & V. Galy (presenter) - Climate (and anthropogenic) influence on organic carbon mobilization and export from watersheds - **Goldschmidt conference**, Boston (USA), August 2018. (Keynote)

T. Eglinton & V. Galy (presenter) - Radiocarbon analysis strategies for elucidation of carbon cycle processes

 - Goldschmidt conference, Boston (USA), August 2018. (Keynote)

V. Galy et al. - Hydroclimate forcing of the terrestrial organic carbon cycle during the last deglaciation **Goldschmidt conference**, Boston (USA), August 2018

V. Galy et al. - Compound-specific radiocarbon dating reveals the age distribution of plant-wax biomarkers exported to the Bengal Fan - **AGU Fall meeting**, New Orleans (USA), 2017

Christian France-Lanord, Volkhard Spiess, Sarah Feakins, Albert Galy, Valier Galy, Pascale Huyghe, and Expedition 354 Scientists. Expedition 354 on the Bengal fan: implications on Neogene erosion regime, climate and vegetation. **IODP-PAGES meeting on the Asian Monsoon**. Shanghai. (Keynote) 2017

French et al., Timescales of terrestrial organic carbon export to the Bengal Fan. **IMOG** 2017, oral presentation.

V. Galy et al. - Variations of the Indian summer monsoon over the Mio-Pliocene recorded in the Bengal Fan (IODP Exp354) – **Goldschmidt conference**, Paris (France), 14-18 August 2017.

Hein, C.J., Galy, V.V., Eglinton, T.I., Post-glacial climate forcings and feedbacks of the carbon cycle in the Ganges-Brahmaputra Basin, **Goldschmidt Conference** 2017, Paris, France.

Dellinger, M., Gaillardet J., Hilton, R.G., Galy V., Bouchez J., Calmels D., Tipper E., Geochemical composition of Mackenzie River sediments: insights into provenance, weathering and recycling processes, **Goldschmidt Conference**, August 2017 Paris, France.

S.Z. Rosengard, V. Galy, A. P. McNichol, R. Spencer, J. Hemingway, Diagnosing and quantifying sources to Amazon River particulate organic carbon via ramped oxidation. **ASLO Aquatic Science meeting**, Honolulu, HI. February 2017. Oral presentation.

Orsi W., et al., Nucleic acid insights into present and past microbial activities in marine sediments, **Deutsche Sammlung für Mikrobielle Zellkulturen** (DSMZ), Braunschweig, Germany, 2017. (Invited)

Orsi W., et al., Insights into the distribution and activity of subseafloor microbes via high-throughput sequencing of DNA and RNA, **GFZ**, Potsdam, Germany, 2017. (Invited)

K. Brown**\***, B. Peucker-Ehrenbrink, J. Blusztajn, R. Francois, G. Fiske, W. Williams, E. Carmack, D. McLennan, A. Schimnowski, V. Galy, Z.A. Wang. 87Sr/86Sr Traces Riverine Inputs to the Canadian Arctic Archipelago. **ASLO Aquatic Sciences Meeting**. Honolulu, Hawaii, USA, February 2017. (poster presentation)

V. Galy, D. Oppo et al. - Disentangling seasonality and mean annual precipitation in the Indo-Pacific Warm Pool: insights from coupled plant wax C and H isotope measurements - **AGU Fall meeting**, San Francisco (USA), 12-16 December 2016.

Hein, C.J., Galy, V., France-Lanord, C., Galy, A., Kudrass, H., and Peucker-Ehrenbrink, B., Post-glacial climate forcing of surface processes in the Ganges-Brahmaputra basin and implications for the global carbon cycle, **AGU Fall Meeting**, San Francisco, CA, December 2016.

K. Brown**\***, W. Williams, E. Carmack, D. McLennan, A. Pedersen, A. Schimnowski, G. Fiske, R. Francois, V. Galy, Z. A. Wang, B. Peucker-Ehrenbrink. Permafrost Draining Rivers in the Canadian Arctic Archipelago: Biogeochemical Properties and Carbon Export Potential. **International Conference on Permafrost**, Potsdam, Germany, June, 2016. (oral presentation)

C France-Lanord, V Spiess, A. Galy, V. Galy, P. Huyghe, A Klaus. Expedition 354 scientists: IODP Expedition 354 to the Bengal Fan: a Neogene record of Himalayan erosion. Implications on the carbon cycle. **EGU** Vienne, 2016. (Invited)

Tilmann Schwenk, Volkhard Spiess, Fenna Bergmann, Christian France-Lanord, Adam Klaus and the IOPD Exp. 354 scientific party Team, Refining the Bengal Fan stratigraphy – A first correlation of IODP Expedition 354 results and seismic data from the Bay of Bengal. **EGU** Vienne, 2016.

Spiess Volkhard, Schwenk Tilmann, Bergmann Fenna, France-Lanord Christian, Klaus Adam and the IODP Expedition 354 Scientific Team.  Evolution of the Middle Bengal Fan at 8°N in the Oligocene to Pliocene - Preliminary Results from IODP Expedition 354. **EGU** Vienne, 2016.

Pascale Huyghe, Christian France-Lanord, and Iodp Expedition 354 scientists, Contribution of Clay mineralogy of Bengal Fan deposits at 8°N for understanding of Himalayan provenance and environmental conditions. **EGU** Vienne, 2016.

Albert Galy, Christian France-Lanord, Volkard Spiess, Adam Klauss, and Iodp Expedition 354 Scientists. Pore-water chemistry of the deep sea fan in the Bay of Bengal sampled by IODP Expedition 354. **EGU** Vienne, 2016.

Maarten Lupker, Jérôme Lavé, and Christian France-Lanord Delayed response of cosmogenic-derived denudation in the eastern Himalaya. **EGU** Vienne, 2016.

Orsi W., et al., Climate oscillations reflected in the microbiome of Arabian Sea sediments, **AGU fall meeting**, San Fransisco, USA, 2016. (Invited)

Orsi W., et al., Shedding light on the ocean’s deep, dark biosphere, Frontiers in Geoscience seminar series in the Munich Geocenter at **Ludwig-Maximilians Universität**, Munich Germany, 2016. (Invited)

Orsi W., et al., Climate oscillations reflected in the Arabian Sea subseafloor microbiome, **EGU**, Vienna, Austria, 2016. (Invited)

S.Z. Rosengard, P. J. Lam, V. Galy, and A.P. McNichol, Water-column transformation of particle organic carbon composition in the Southern Ocean Great Calcite Belt. **Ocean Carbon and Biogeochemistry Workshop**, Woods Hole, MA. July 2016. Poster.

S. Z. Rosengard, P. J. Lam, V. Galy, and A.P. McNichol, Export and transfer of Southern Ocean particulate organic carbon through the lens of ramped oxidation. **Marine Chemistry and Geochemistry department seminar**, Woods Hole Oceanographic Institution, MA. March 2016. Oral presentation.

S. Z. Rosengard, P. J. Lam, V. Galy, and A.P. McNichol, Export and transfer of Southern Ocean particulate organic carbon through the lens of ramped oxidation. **Ocean Science Meeting**, New Orleans, LA. February 2016. Poster.

C France-Lanord, V Spiess, A Klaus. Expedition 354, IODP Expedition 354: a Neogene record of Himalayan erosion. **HKT Workshop**, Aussois (Keynote), 2016.

C France-Lanord, V Spiess, A Klaus. Expedition 354 scientists: Neogene and Late Paleogene Record of Himalayan Orogeny and Climate: A Transect Across the Middle Bengal Fan. **AOGS Singapour**, 2015 (Invited)

Ponton C., Galy V., Galy A. and IODP Exp. 354 Science Party. Wood-Rich Turbidites in the Bengal Fan: A Discovery by IODP Expedition 354. **Goldschmidt conference**, 2015.

Rosenheim, B.E.; Vetter, L.; Galy, V.; Plante, A.; Mollenhauer, G.; Hemingway, J.; Grant, K.; Derry, L. “Thermochemical 14C spectra and carbon turnover time in soils – a (changing?) latitudinal gradient? (Invited).” **AGU Fall Meeting**, San Francisco, CA, 14-18 December 2015.

Rosenheim, B.E.; Roberts, B.J.; Van Metre, P.; Galy, V.; Shields, M; Cui, X.; Bianchi, T.S. “Domination of soil in 14C age spectra in sediments from a major river system – implications for carbon cycling.” **Goldschmidt Conference**, Prague, Czech Republic, August 16-21, 2015.

K. Brown**\***, W. Williams, E. Carmack, D. McLennan, A. Pedersen, A. Schimnowski, G. Fiske, R. Francois, V. Galy, Z. A. Wang, B. Peucker-Ehrenbrink. Geochemical Properties of Permafrost Draining Rivers in the Canadian Arctic Archipelago. **ArcticNet Annual Scientific Meeting**. Vancouver, BC, December 2015. (oral presentation)

C France-Lanord, V Spiess, A Klaus. Expedition 354 scientists: IODP Expedition 354: A Bengal fanrecord of Himalayan erosion, weathering and organic carbon burial during the Neogene. **AGU Fall Meeting**,  San Francisco, 2015 (Invited)

Orsi W., et al., Nucleic acid insights into present and past microbial activities in marine sediments, **Princeton University**, 2015 (invited).

Orsi W., et al., Microbial ecosystem-climate dynamics over the last glacial interglacial cycle in the Arabian Sea, **International Meeting of Organic Geochemistry**, Prague, Czech Republic, 2015. (Invited plenary presentation)

Orsi W., et al., Unraveling complex microbial interactions with organic matter, **University of Munich**, 2015. (Invited).

Orsi W., et al., Marine microbial responses to past and present water column anoxia, Graduate School of Oceanography, University of Rhode Island, 2015. (Invited)

K. Brown**\***, W. Williams, E. Carmack, D. McLennan, A. Pedersen, A. Schimnowski, G. Fiske, V. Galy,  Z. A. Wang, B. Peucker-Ehrenbrink. A Geochemical Journey: Fingerprinting the Rivers of the Canadian Arctic Archipelago. **49th CMOS Congress & 13th AMS Conference on Polar Meteorology and Oceanography**. Whistler, BC, June 2015. (poster presentation)

S.Z. Rosengard, V. Galy, R. Spencer, and A.P. McNichol, Temporal and water column variability in particulate organic carbon composition on the Amazon River main-stem. **AGU Fall Meeting**, San Francisco, CA. December 2015. Poster.

S.Z. Rosengard, P. J. Lam, V. Galy, and A.P. McNichol, Ramped oxidation of particulate organic carbon from the Southern Ocean Great Calcite Belt. **Ocean Carbon and Biogeochemistry Workshop**, Woods Hole, MA. July 2015. Poster.

Arbuszewski, J., Oppo, D., Huang, K.-F., Galy, V., Dubois, N., Mohtadi, M., Herbert, T., Rosenthal, Y., Linsley, B., Lynch-Stieglitz, J., Koutavas, A. and G. Rustic, Multiproxy Reconstruction of Tropical Pacific Holocene Mean State Variability, **AGU Fall meeting**, San Francisco, Calif., 15-19 Dec. 2014

Galy, V., Hein, C.J. (presenter), Kudrass, H., Eglinton, T., Peucker-Ehrenbrink, B., Climate forcing of the terrestrial organic carbon cycle during the last deglaciation: the Himalaya-Bengal fan example, **GSA meeting**, 2014, Invited.

Rosenheim, B.E.; Plante, A.F.; Galy, V.; Williams, E.K.; Fernandez, A.; Vetter, L.; Mollenhauer, G.; Tornqvist, T. “Interpreting radiocarbon age spectra in the framework of soil organic matter.” **The Sixth International Workshop on Soil and Sedimentary Organic Matter Stabilization and Destabilization (SOM6)**, Kiawah Island, South Carolina, October 5-9, 2014.

Rosenheim, B.E.; Kolasinski, J.; Plante, A.; Galy, V.; Hemmingway, J.; Derry, L.; Grant, K. “Analyse isotopique par pyrolyse graduelle de matériel organique sédimentaire : Comment tracer les sources et les mélanges de sédiments au sein des fleuves et des bassins.” **SFIsotrace 2014**, Brest, France, September 8-12, 2014. (oral presentation in French)

Fornace, K. L., V. Galy, & K. A. Hughen. Comparing terrestrial organic carbon cycle dynamics in interglacial and glacial climates in tropical South America. **AGU Fall Meeting**, San Francisco, CA. Dec. 15-19, 2014.

Fornace, K. L., B. S. Whitney, F. E. Mayle, K. A. Hughen, & V. Galy. Insight into late Quaternary vegetation and climate change in the Pantanal wetlands from leaf wax stable isotopes. **Gordon Research Conference on Organic Geochemistry**, Holderness, NH. August 3-8, 2014. (poster)

Ponton, C., Feakins S.J, West, A. J., and Galy, V. Age of Terrestrial Biomarkers in Fluvial Transit Across the Andes-Amazon Reveal Timescales of Carbon Storage and Turnover. **AGU fall meeting**, 2014.

Ponton, C., West, A. J., Feakins S.J. and Galy, V. The importance of catchment morphology in leaf wax biomarker signals. **Southern California Geobiology Symposium**, 2014.

# V. Galy, B. Peucker-Ehrenbrink, T. Eglinton - A global perspective on riverine export of terrestrial organic carbon to the ocean – Goldschmidt conference, Sacramento (USA), 8-13 June 2014. (Poster)

G. Soulet**\***, J. Hemingway, A. McNichol, V. Galy. Developments in ramped-combustion radiocarbon analysis of natural sediment: towards correcting organic carbon composition (δ13C and ∆14C) for carbonate contribution. **AMS Conference**, 13th Congress, August 2014, Aix-en-Provence, France. Oral.

France-Lanord C. Lupker M., Galy V, Bouchez J., Gaillardet J. & LavéJ. , Geochemical variability of river sediments : sampling, characterisation and budget. **EGU** 2013 -Vienna.

Lupker M, France-Lanord C, Galy V., Lavé J, and Kudrass H. Increasing chemical weathering in the Himalayan system since the Last Glacial Maximum. **EGU** 2013 -Vienna.

France-Lanord C, Gajurel A, Galy V. Sediment transfer and deposition throughout the Himalayan continental and oceanic basin : constraint from geochemical composition of river sediments. **EGU** 2013 -Vienna.

France-Lanord C, Galy V, Gajurel A, Lavé J, Lupker M & Morin G . Balancing chemical and physical erosion in the Ganga basin. **Goldschmidt conference** 2013, Firenze.

France-Lanord C, Galy V, Lavé J, Lupker M & Morin G. Erosion processes in the Himalayan basin and river sediment characteristics. **Monitoring Isotopes in Rivers: Creation of the Global Network of Isotopes in Rivers (GNIR). Vienna IAEA**, 2013 (Invited)

France-Lanord C, Galy V, Lavé J, Lupker M & Morin G. Erosion processes in the Himalayan basin and river sediment characteristics. **Records of Geohazards and Monsoonal Changes in the Northern Bay of Bengal, Workshop Magellan**, 2013 (Invited)

Dubois, N., Oppo, D., Galy, V., Mohtadi, M., Fornace, K., Eglinton, T. I., Kuhnt, W.G., Lückge, A., Arbuszewski, J., Tierney, J. E., Rosenthal, Y., Linsley, B. K. and A. Gorin, Indonesian Vegetation and Rainfall as seen from Plant Wax 13C and D: Modern Distribution and Downcore Reconstructions, **ICP-XI**, Sitges, Spain, 1-6 September 2013.

Ponton, C., West, A. J., Feakins S.J. and Galy, V. Biomarkers in transit reveal the nature of fluvial integration. **AGU fall meeting**, 2013.

V. Galy, B. Peucker-Ehrenbrink, T. Eglinton – Erosion controls the global export of carbon from the terrestrial biosphere – **WHOI, MCG seminar**, September 10th 2013.

France-Lanord, C. Lupker, M. Lavé, J. & Galy, V. Geochemical heterogeneity of sediment load in the Brahmaputra and Ganga rivers. **Colloque Erosion-Altération, Academie des Sciences** – Paris, 2012. (Invited)

Rosenheim, B.E.; Galy, V.; Roberts, B.J.; Allison, M.A.; Kolker, A.S. “Age spectra of riverine POC – does variability within or between river basins have a larger impact on POC age distributions?” **AGU Fall Meeting**, San Francisco, CA 3 December, 2012.

Hein, C.J., Galy, V., Peucker-Ehrenbrink, B., Eglinton, T.I., Preliminary evidence for a monsoonal forcing of the dynamics of terrestrial organic carbon export to the Bay of Bengal, **Gordon Research Conference in Organic Geochemistry**: 30 July – 3 August 2012, Plymouth, NH, USA.

Rosenheim, B.E., Roberts, B.J.; Galy, V.; Allison, M.A.; Kolker, A.S.; Beaupré, S.; Roe, K.M. “Radiocarbon age distributions in riverine POC.” **21st International Radiocarbon Conference**, Paris, France, 2012.

France-Lanord, C. Lupker, M. Gallo, F. Galy, V. Gajurel A.P. & Morin G.,   Origin and fluxes of dissolved sulphate in the Himalayan system : evaluation and implication. **Goldschmidt conference**, Montreal, 2012.

Dellinger, M., Gaillardet, J., Galy, V., Louvat, P., Birck, J.L., Bouchez, J., The fractionation of Lithium isotopes during continental weathering: clues from the Amazon and Mackenzie rivers, **Goldschmidt Conference**, Montreal, Canada, 2012.

Ponton, C., Eglinton, T.I., Giosan, L., Galy, V. and Montlucon, D. Climate controls residence time of organic carbon in a monsoonal river basin. **Gordon Research Conference in Organic Geochemistry**, 2012.

Arbuszewski, J., Oppo, D., Huang, K.-F., Dubois, N., Galy, V., Mohtadi, M., Herbert, T., Rosenthal, Y. and B. Linsley (2012), Multiproxy reconstruction of tropical Pacific (sub)surface gradients through the Holocene, **AGU Fall meeting**, San Francisco, Calif., 3-7 Dec. 2012.

V. Galy, T. Eglinton, C. France-Lanord - Organic carbon residence time in the Ganges-Brahmaputra river system: how long is the journey to the Bay of Bengal?- **Chapman conference: Source to Sink**, Oxnard (USA), 24-27 January 2011. (Poster)

France-Lanord, C.; Lupker, M.; Galy, V. Gaillardet J. & Lavé, J. Modern and past Himalayan erosion : insight from Ganga, Brahmaputra and Bengal fan sediments. **Meeting CEFIPRA**, Chenai, 2011.

Bouchez, J.; Galy, V.; Gaillardet, J.; France-Lanord, C.; Hilton, R. G.; Maurice, L. Transport of particulate organic carbon in the Amazon River: insights from river sediment depth-profiles. **EGU**, Vienna, 2011.

Lupker M, France-Lanord C, Galy V, Lavé J & Kudrass H,  Himalayan Weathering Evolution from LGM to Present– **Goldschmidt conference**, Prague, 2011

France-Lanord, C.; Lupker, M.; Galy, V. & Lavé, J. Himalayan erosion and sediment influx to the bay of Bengal. ICAMG, Goa, 2011 (Invited)

V. Galy, T. Eglinton, C. France-Lanord, S. Sylva - The provenance of vegetation and environmental signatures encoded in vascular plant biomarkers carried by the Ganges-Brahmaputra rivers - **AGU Fall meeting**, San Francisco (USA), 13-17 December 2010. (Poster)

Lupker M., France-Lanord C., Galy V., Kudrass H. (2010). Bay of Bengal: recording the weathering evo- lution of the Ganga and Brahmaputra basin during deglaciation. **AGU Fall meeting**, San Francisco (USA), 13-17 December 2010.

Feng, X., Galy, V., Rosenheim, B.E., Roe, K.M., Williams, E.K. “Structure, provenance and residence time of terrestrial organic carbon: insights from Programmed temperature Pyrolysis-Combustion of river sediments.” **AGU Fall Meeting**, San Francisco, CA, 13-17 Dec. 2010.

V. Galy, T. Eglinton, C. France-Lanord - Protracted storage of biospheric organic carbon in the Ganges-Brahmaputra basin: “tropical permafrost”? – **Gordon Research Conference of Organic Geochemistry**, Holderness (NH, USA), 1-5 August 2010. (Poster)

V. Galy, C. France-Lanord, B. Peucker-Ehrenbrink, P. Huyghe - Sr-Nd-Os evidence for a stable erosion regime in the Himalaya during the past 12 Myr – **EGU meeting**, Vienna (Austria), 3-7 May 2010. (Poster)

V. Galy, B. Peucker-Ehrenbrink, et al. - Controls on the flux, age and composition of terrestrial organic matter exported by rivers to the ocean – **EGU meeting**, Vienna (Austria), 3-7 May 2010.

Beyssac, O., Galy, V., Bouchez, J., Gaillardet, J., and France-Lanord, C., 2009. Orogeny, metamorphism and erosion: Towards a selective recycling of graphite and long-term stabilization of C in the crust. **Goldschmidt conference**.

Chabaux, F., Granet, M., Blaes, E., Dosseto, A., France-Lanord, C., and Valier, V., 2009. Determination of source and transfer-time of river sediments in alluvial plain from U-series nuclides: Evidence from the Ganges River System. **Goldschmidt conference**.

France-Lanord, C., Galy, V., Derry, L. A. D., Evans, M. E. J., and Lupker, M., 2009. A budget of the Himalayan orogenesis on the Global Carbon Cycle. **EGU General Assembly**. (Invited)

France-Lanord, C., Galy, V., and Lupker, M., 2009. Orogenic sources and sinks of CO2: The Himalayan example. **Goldschmidt conference**. (Invited)

Lupker, M., France-Lanord, C., Lave, J., and Galy, V., 2009. Spatial variation of weathering in the Ganga Basin. **Goldschmidt conference**.

V. Galy, T. Eglinton, C. France-Lanord - Organic carbon export during Himalayan erosion: time constraints from bulk and molecular level radiocarbon dating – **International Meeting on Organic Geochemistry**, Bremen (Germany), 6-11 September 2009. (Poster)

V. Galy, C. France-Lanord, L. François - C4 Plants Decline in the Himalayan Basin Since the LGM: Implications for the Evolution of the Monsoon - **AGU Fall meeting**, San Francisco (USA), 15-19 December 2008. (Poster)

V. Galy, O. Beyssac, C. France-Lanord, T. Eglinton - Selective Recycling of Graphite During Continental Erosion: a Long-Term Stabilization of C in the Crust - **AGU Fall meeting**, San Francisco (USA), 15-19 December 2008. (Poster)

France-Lanord, C., Galy, V., Galy, A., Gaillardet, J., Gajurel, A., Lartiges, B., Rahman, M., and Singh, S. K., 2008. Anthropogenic increase of soil erosion in the Ganga floodplainInternational Symposium on Climate Change and Food Security in South Asia. **World Meteorological Organization**, Dhaka. (Invited)

France-Lanord, C., Galy, V., and Lupker, M., 2008. Quantifying modern Himalayan flux of carbon from river sediments. **British Society for Geomorphology (BSG/BGRG) Annual Conference**, Exeter. (Invited)

Bouchez, J., Gaillardet, J., France-Lanord, C., and Galy, V., 2008. Isotopic tracing of organic carbon weathering in the Amazon River. **Goldschmidt conference**.

V. Galy, C. France-Lanord, O. Beyssac, H. Kudrass, T. Eglinton - Efficient Organic Carbon Burial in the Bengal Fan sustained by the Himalayan Erosional system - **Ocean Sciences meeting**, Orlando (USA), 3-7 March 2008.

V. Galy, C. France-Lanord, B. Lartiges - Particulate organic carbon transport from the Himalaya to the Ganga-Brahmaputra Delta - **International Conference on Deltas**, Dhaka (Bangladesh), 6-13 January 2008. (Poster)

V. Galy, C. France-Lanord, O. Beyssac, P. Faure, H. Kudrass, F. Palhol - Efficient Organic Carbon Burial in the Bengal Fan sustained by the Himalayan Erosional system - **International Conference on Deltas**, Dhaka (Bangladesh), 6-13 January 2008.

Bouchez, J., Gaillardet, J., France-Lanord, C., Galy, V., and Maurice-Bourgoin, L., 2007. Weathering over a large range of erosion solid products: Insights from Amazon river depth-samplings. **Goldschmidt conference**.

V. Galy, O. Beyssac, C. France-Lanord - Erosion, Transport and Burial Of Petrogenic Organic Carbon In the Himalayan System: A Closed Loop In The Carbon Cycle? - **AGU Fall meeting**, San Francisco (USA), 10-14 December 2007. (Poster)

France-Lanord C., Derry L. A., Evans M., and Galy V. (2006) Himalayan Orogenesis and the Carbon Cycle. 21st **Himalaya Karakoram Tibet workshop**.

France-Lanord C., Galy A., Galy V., and Singh S. K. (2006) Can we derive chemical erosion flux from river sediment? **Goldschmidt conference**, Melbourne (Australia), 27 august, 2 September 2006.

France-Lanord C., Galy V., Pik R., and Singh S. K. (2006) Modern and past erosion of the Eastern Himalaya traced by isotopic compositions of river sediments and Bengal Fan sediments. **Eastern Himalaya and adjoining regions Workshop**.

France-Lanord, C., Galy, V., Pik, R., and Singh, S. K., 2006. Extreme Erosion of the Eastern Himalayan Syntaxis Traced by Isotopic Compositions of River and Bengal Fan Sediment. **AGU Fall meeting**, San Francisco (USA), 11-15 December 2006. (Invited).

V. Galy, C. France-Lanord - Organic Carbon Burial Generated by the Himalayan Erosion: Exceptional Burial Efficiency in the Bengal Fan Sediments - **AGU Fall meeting**, San Francisco (USA), 11-15 December 2006.

V. Galy, C. France-Lanord - Particulate organic carbon transport during himalayan erosion - **Goldschmidt conference**, Melbourne (Australia), 27 august, 2 September 2006.

V. Galy, C. France-Lanord - Particulate Organic Carbon Transport from the Himalaya to the Ganga-Brahmaputra Delta - **Himalaya-Karakoram-Tibet Workshop**, 29th-31st March 2006, Cambridge England. (Poster)

V. Galy, C. France-Lanord, L. Reisberg - Sr and Nd isotopic compositions of Bengal Fan (DSDP 218): Transhimalayan contribution to the Mio-Pliocene sediments? - **Himalaya-Karakoram-Tibet Workshop**, 29th-31st March 2006, Cambridge England.

V. Galy, C. France-Lanord - Particulate Organic Carbon Transport From the Himalaya to the Ganga-Brahmaputra Delta - **AGU Fall meeting**, San Francisco (USA), 5-9 December 2005.

V. Galy, F. Palhol, P. Faure, C. France-Lanord - Last glacial cycle vegetation change in Himalaya from bulk and molecular d13C analyses in Bengal fan sediments - **International Meeting on Organic Geochemistry**, 12th-16th September 2005, Sevilla, Spain. (Poster)

France-Lanord C., Galy A., Galy V., and Singh S. K. (2005) Modern fluxe of erosion of the Ganga Basin from geochemical budget. **Himalaya-Karakoram-Tibet Workshop**.

France-Lanord C., Galy V., Galy A., and Singh S. (2005) Suspended Sediment Variability and Erosion Geochemical Budget of the Ganga Basin. **AGU Fall meeting** San Francisco (USA), 5-9 December 2005.

Palhol F., Galy V., Faure P., and France-Lanord C. (2005) Paleoenvironmental significance of n-alkane dD from Ganga - Brahmaputra ancient sediments. **International Meeting on Organic Geochemistry**.

V. Galy, C. France-Lanord, P. Huyghe - Geochemical differentiation induced by sediment transport in the Bengal fan: implications for carbon uptake budget - **Goldschmidt conference**, 7th-11th June 2004, Copenhague, Denmark.

France-Lanord C., Singh S. K., Galy V., and Galy A. (2004) CO2 fluxes during Himalayan erosion. AOGS **conference**.