Short curriculum vitae

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CNRS Senior Research Scientist (*Directeur de recherche CNRS de classe exceptionnelle*)
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Born 14 December 1958 in Antibes, France. French citizen. Married, no children.

Educational background

- 1994: *Habilitation*, Biological Oceanography, University of Nice, France
- 1987: Ph. D., Biological Oceanography, University of Aix-Marseille II, France
- 1982: M. Sc. in Oceanography, University of Aix-Marseille II

Professional background

- 2015-present: Associate Scientist, Institute for Sustainable Development and International Relations, France
- 2005-present: Senior Research Scientist, Laboratoire d'Océanographie de Villefranche, France
- 2006-2009: Research Professor, Marine Biology Institute, Shantou University, China
- 2004-2005: Visiting scientist, Rutgers University and National Center for Atmospheric Research, USA
- 1998-2004: Group leader, Laboratoire d'Océanographie de Villefranche, France
- 1998-2004: Group leader, Monaco Scientific Center, Principality of Monaco
- 1990-1992: Research Scientist, CNRS and University of Perpignan, France
- 1988-1990: Postdoctoral Research Scientist, Australian Institute of Marine Science
- 1985-1987: Reader, University of Nice, France

Awards

- Elected member, Academia Europaea (Exact Sciences, 2018)
- Blaise Pascal Medal in Earth and Environmental Sciences, and elected member of the European Academy of Sciences (2014)
- Vladimir Vernadsky Medal, European Geosciences Union (2012)
- Union Service Award, European Geosciences Union (2005)
- Outstanding reviewer, Limnology & Oceanography (2002)
- Oceanography medal of the *Société d'Océanographie de France* (2001)

Research interests

- Carbon and carbonate cycling in coastal ecosystems
- Response of marine organisms and ecosystems to global environmental changes, including ocean acidification
- Ocean solutions

Editorial activities

- 2011: Editor of *Ocean acidification*, a book published by Oxford University Press
- 2010-present: Editor, *Biogeosciences*
- 2006-present: Topic Editor, *The Encyclopedia of Earth*
- 2004-2009: Founding Editor-in-Chief, *Biogeosciences*
- 2002-2014: Biogeosciences Editor, *The Eggs*
- 2002-2004: Editor, *Surveys in Geophysics*
- 1997-2005: Editor, *Coral Reefs*

Recent professional activities

- 2018-present: Member, Scientific and Technical Advisory Committee, Copernicus Marine Environment Monitoring Service

- 2017-present: Coordinating Lead and Contributing Author, IPCC Special Report on the Ocean and Cryosphere in a Changing Climate
- 2017-2018: Contributing Author, IPCC Special Report on Global Warming of 1.5 °C
- 2016-present: SCOR Working Group #149: Changing Ocean Biological Systems: how will biota respond to a changing ocean?
- 2016: Member, Scientific Committee, Earth and Environment of the European Academy of Sciences
- 2015-present: Chair, Ocean Acidification and Biodiversity Program, French Environment Ministry
- 2015-present: Regional expert group on climate in Provence Alpes-Côte d'Azur
- 2015-2018: Member, Scientific Council, Ocean-Climate Platform, Unesco
- 2015-2016: Member, Scientific Council, French Arctic Program
- 2015-2017: Scientific Council, Academy 3, Université Côte d'Azur
- 2014: Chair, International SSC, The Oceans in a High CO_2 World 4, Hobart, 2016
- 2014: Elected member, European Academy of Sciences
- 2013-present: Member of the Scientific Council of the French Parliamentary Office for Scientific Research and Innovation
- 2013-present: President, Monegasque Association for Ocean Acidification.
- 2012-2017: Member, Advisory Board of the Ocean Acidification International Coordination Centre
- 2012: Member, Panel of the US Academy of Science to review the National Ocean Acidification Research Plan
- 2010-2014: Lead and Contributing Author, Working Group II of the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
- 2012: Member, Scientific Committee, The Oceans in a High-CO_2 World III
- 2009-2012: Chair, SOLAS-IMBER Working Group on ocean acidification. Member since 2009
- 2009: Organiser, 2009 meeting of the American Society for Limnology and Oceanography in Nice, 2350 participants
- 2009: Co-organiser, Pacific Science Intercongress (Scientific Committee), Tahiti, March 2009, 881 participants
- 2007-2013: Member, Scientific Steering Committee of the IGBP-SCOR component IMBER (Integrated Marine Biogeochemistry and Ecosystem Research)
- 2008-2012: Scientific Coordinator of EPOCA, the European Project on Ocean Acidification
- 2001-2005: Founding President, Biogeosciences Division of the European Geosciences Union
- 2000-2004: Member, American Geophysical Union Biogeosciences Committee
- 2000-2004: Member, *Comité national de la recherche scientifique, section 30*

Recent grants (partial listing)

- Southern Ocean pH Monitoring, Prince Albert II of Monaco Foundation (2017-2018)
- The Ocean Solutions Initiative, Veolia, Prince Albert II of Monaco Foundation, Ocean Acidification International Coordination Centre and French Facility for Global Environment (2016-2019)
- Integrated Arctic Observation System (INTAROS), European Commission (2016-2020)
- HighCO_2Seas, Total Foundation (2016, led by Stazione Zoologica, Napoli)
- *Small islands addressing climate change: towards storylines of risk and adaptation* (STORISK), ANR (2016-2020)
- AWIPEV-CO_2, French Polar Institute (2014-2017)
- The Oceans 2015 Initiative, Prince Albert II of Monaco Foundation, Ocean Acidification International Coordination Centre, BNP Paribas Foundation (2014)
- European Ocean Free Carbon Dioxide Enrichment Experiment, eFOCE, BNP Paribas Foundation (2011)
- Mediterranean Sea Acidification in a changing climate, MedSeA, European Commission (2011)
- European Project on Ocean Acidification, EPOCA, European Commission (2008). I coordinated this large-scale integrating project which comprised 32 partner institutions and more than 160 scientists

Some key and recent papers—Complete list: http://bit.ly/1LG0pvF

<2012 Gattuso J.-P., Frankignoulle M. & Wollast R., 1998. Carbon and carbonate metabolism in coastal

aquatic ecosystems. *Annual Review of Ecology and Systematics* 29:405-434.

Gattuso J.-P., Frankignoulle M. & Smith S. V., 1999. Measurement of community metabolism and significance of coral reefs in the CO_2 source-sink debate. *Proceedings of the National Academy of Science U.S.A.* 96:13017-13022.

Gattuso J.-P. & Buddemeier R. W., 2000. Ocean biogeochemistry: calcification and CO_2. *Nature* 407:311-312.

Martin S. & Gattuso J.-P., 2009. Response of Mediterranean coralline algae to ocean acidification and elevated temperature. *Global Change Biology* 15:2089-2100.

Comeau S., Jeffree R., Teyssié J.-L. & Gattuso J.-P., 2010. Response of the Arctic pteropod *Limacina helicina* to projected future environmental conditions. PLoS ONE 5, e11362. doi:10.1371/journal.pone.0011362.

Liu J., Weinbauer M. G., Maier C., Dai M. & Gattuso J.-P., 2010. Effect of ocean acidification on microbial diversity, and on microbe-driven biogeochemistry and ecosystem functioning. *Aquatic Microbial Ecology* 61:291-305.

Rodolfo-Metalpa R., Martin S., Ferrier-Pagès C. & Gattuso J.-P., 2010. Response of the temperate coral Cladocora caespitosa to mid- and long-term exposure to pCO_2 and temperature levels projected for the year 2100 AD. *Biogeosciences* 7:289-300.

Gattuso J.-P. & Hansson L. (eds.), 2011. *Ocean acidification*, 326 p. Oxford: Oxford University Press.

Richier S., Fiorini S., Kerros M.-E., von Dassow P. & Gattuso J.-P., 2011. Response of the calcifying coccolithophore *Emiliania huxleyi* to low pH/high pCO_2: from physiology to molecular level. *Marine Biology* 158:551-560.

Smith S. V. & Gattuso J.-P., 2011. Balancing the oceanic calcium carbonate cycle: consequences of variable water column Ψ. *Aquatic Geochemistry* 17:327-337.

Turley C. & Gattuso J.-P., 2012. Future biological and ecosystem impacts of ocean acidification and their socioeconomic-policy implications. *Current Opinion In Environmental Sustainability* 4:278-286.

2013 Asnaghi V., Chiantore M., Mangialajo L., Gazeau F., Francour P., Alliouane S. & Gattuso J.-P., 2013. Cascading effects of ocean acidification in a rocky subtidal community. *PLoS ONE* 8:e61978.

Billé R., Kelly R., Biastoch A., Harrould-Kolieb E., Herr D., Joos F., Kroeker K., Laffoley D., Oschlies A. & Gattuso J.-P., 2013. Taking action against ocean acidification: a review of management and policy options. *Environmental Management* 52:761-779.

de Carlo E. H., Mousseau L., Passafiume O., Drupp P. & Gattuso J.-P., 2013. Carbonate chemistry and air-sea CO_2 flux in a NW Mediterranean Bay over a four-year period: 2007-2011. *Aquatic Geochemistry* 19:399-442.

Dorey N., Melzner F., Martin S., Oberhänsli F., Teyssié J.-L., Bustamante P., Gattuso J.-P. & Lacoue-Labarthe T., 2013. Ocean acidification and temperature rise: effects on calcification during early development of the cuttlefish *Sepia officinalis*. *Marine Biology* 160:2007-2022.

Gattuso J.-P., Mach K. J. & Morgan G. M., 2013. Ocean acidification and its impacts: an expert survey. *Climatic Change* 117:725-738.

Gazeau F., Parker L. M., Comeau S., Gattuso J.-P., O'Connor W., Martin S., Pörtner H.-O. & Ross P., 2013. Impacts of ocean acidification on marine shelled molluscs. *Marine Biology* 160:2207-2245.

Kroeker K., Kordas R., Crim R., Hendriks I., Ramajo L., Singh G., Duarte C. & Gattuso J.-P., 2013. Impacts of ocean acidification on marine organisms: quantifying sensitivities and interaction with warming. *Global Change Biology* 19:1884-1896.

Maier C., Schubert A., Berzunza Sànchez M. M., Weinbauer M. G., Watremez P. & Gattuso J.-P., 2013. End of the century pCO_2 levels do not impact net calcification in Mediterranean cold-water corals. *PLoS ONE* 8:e62655.

Martin S., Charnoz A. & Gattuso J.-P., 2013. Photosynthesis, respiration and calcification of the Mediterranean crustose coralline alga *Lithophyllum cabiochae* (Corallinales, Rhodophyta). *European Journal of Phycology* 48:163-172.

Martin S., Cohu S., Vignot C., Zimmerman G. & Gattuso J.-P., 2013. One-year experiment on the physiological response of the Mediterranean crustose coralline alga, *Lithophyllum cabiochae*, to elevated pCO_2 and temperature. *Ecology and Evolution* 3:676-693.

Motegi C., Tanaka T., Piontek J., Brussard C. P. D., Gattuso J.-P. & Weinbauer M. G., 2013. Effect of CO_2 enrichment on bacterial metabolism in an Arctic fjord. *Biogeosciences* 10:3285-3296.

Pretet C., Samankassou E., Felis T., Reynaud S., Böhm F., Eisenhauer A., Ferrier-Pagès C., Gattuso J.-P. & Camoin G., 2013. Constraining calcium isotope fractionation ($\delta^{44/40}$Ca) in modern and

fossil scleractinian coral skeleton. *Chemical Geology* 340:49-58.

Riebesell U., Gattuso J.-P., Thingstad T. F. & Middelburg J. J., 2013. Arctic ocean acidification: pelagic ecosystem and biogeochemical responses during a mesocosm study. *Biogeosciences* 10:5619-5626.

Tanaka T., Alliouane S., Bellerby R. G. J., Czerny J., de Kluijver A., Riebesell U., Schulz K. G., Silyakova A. & Gattuso J.-P., 2013. Effect of increased pCO_2 on the planktonic metabolic balance during a mesocosm experiment in an Arctic fjord. *Biogeosciences* 10:315-325.

Weinbauer M. G., Liu J., Motegi C., Maier C., Pedrotti M. L., Dai M. & Gattuso J.-P., 2013. Seasonal variability of microbial respiration and bacterial and archaeal community composition in the twilight zone. *Aquatic Microbial Ecology* 71:99-115.

2014 Wong P. P., Losada I. J., Gattuso J.-P., Hinkel J., Khattabi A., McInnes K., Saito Y. & Sallenger A., 2014. Coastal systems and low-lying areas. In: Field C. B. et al. (Eds.), Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp. 361-409. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

Gattuso J.-P., Hoegh-Guldberg O. & Pörtner H.-O., 2014. Coral reefs. In: Field C. B. et al. (Eds.), Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp. 97-100. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

Gattuso J.-P., Brewer P., Hoegh-Guldberg O., Kleypas J. A., Pörtner H.-O. & Schmidt D., 2014. Ocean acidification. In: Field C. B. etal. (Eds.), Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp. 129-131. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

Field C., Barros V., Mach K., Mastrandrea M., van Aalst M., Adger N., Aldunce P., Arent D., Barnett J., Betts R., Bilir E., Birkmann J., Carmin J., Chadee D., Challinor A., Chatterjee M., Cramer W., Davidson D. J., Estrada Y., Gattuso J.-P., Hijioka Y., Hoegh-Guldberg O., Huang H.-Q., Insarov G., Jones R., Kovats S., Romero Lankao P., Larsen J. N., Losada I., Marengo J., McLean R., Mearns L., Mechler R., Morton J., Niang I., Oki T., Olwoch J. M., Opondo M., Poloczanska E., Pörtner H.-O., Redsteer M. H., Reisinger A., Revi A., Schmidt D., Shaw R., Solecki W., Stone J., Strzepek K., Suarez A., Tschakert P., Valentini R., Vicuna S., Villamizar A., Vincent K., Warren R., White L. L., Wilbanks T., Wong P. P. & Yohe G., 2014. Technical summary. In: Field C. B. et al. (Eds.), Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp. 35-94. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

Gattuso J.-P., Kirkwood W., Barry J. P., Cox E., Gazeau F., Hansson L., Hendriks I. E., Kline D. I., Mahacek P., Marker M., Martin S., McElhany P., Peltzer E. T., Reeve J., Roberts D., Saderne V., Tait K., Widdicombe S. & Brewer P., 2014. Free-ocean CO_2 enrichment (FOCE) systems: present status and future developments. *Biogeosciences* 11:4057-4075.

2015 Gattuso J.-P., Magnan A., Billé R., Cheung W. W. L., Howes E. L., Joos F., Allemand D., Bopp L., Cooley S., Eakin C. M., Hoegh-Guldberg O., Kelly R. P., Pörtner H., Rogers A. D., Baxter J. M., Laffoley D., Osborn D., Rankovic A., Rochette J., Sumaila U. R., Treyer S. & Turley C., 2015. Contrasting futures for ocean and society from different anthropogenic CO_2 emissions scenarios. *Science* 349:aac4722.

Maugendre L., Gattuso J.-P., Louis J., de Kluijver A., Marro S., Soetaert K. & Gazeau F., 2015. Effect of ocean warming and acidification on a plankton community in the NW Mediterranean Sea. *ICES Journal of Marine Science* 72:1744-1755.

Orr J. C., Epitalon J.-M. & Gattuso J.-P., 2015. Comparison of ten packages that compute ocean carbonate chemistry. *Biogeosciences* 12:1483-1510.

Riebesell U. & Gattuso J.-P., 2015. Lessons learned from ocean acidification research. *Nature Climate Change* 5:12-14.

2016 Cox T. E., Gazeau F., Alliouane S., Hendriks I., Mahacek P., Le Fur A. & Gattuso J.-P., 2016. Effects of *in situ* CO_2 enrichment on structural characteristics, photosynthesis, and growth of the Mediterranean seagrass *Posidonia oceanica*. *Biogeosciences* 13:2179-2194.

Edmunds P. J., Comeau S., Lantz C., Andersson A., Briggs C., Cohen A., Gattuso J.-P., Grady J. M., Gross K., Johnson M., Muller E. B., Ries J. B., Tambutté S., Tambutté E., Venn A. & Carpenter R. C., 2016. Integrating the effects of ocean acidification across functional scales on tropical coral reefs. *BioScience* 66:350-362.

Jiang L.-Q., Arzayus K. M., Gattuso J.-P., Garcia H. E., Chandler C., Kozyr A., Yang Y., Thomas R., Beck B. & Spears T., 2016. How to Document - Ocean Acidification Data. *Limnology and Oceanography e-Lectures* 6:1-29.

Magnan A. K., Colombier M., Billé R., Hoegh-Guldberg O., Joos F., Pörtner H.-O., Waisman H., Spencer T. & Gattuso J.-P., 2016. Implications of the Paris Agreement for the ocean. *Nature Climate Change* 6:732-735.

Maier C., Popp P., Sollfrank N., Weinbauer M. G., Wild C. & Gattuso J.-P., 2016. Effects of elevated pCO_2 and feeding on net calcification and energy budget of the Mediterranean cold-water coral *Madrepora oculata*. *The Journal of Experimental Biology* 219:3208-3217.

McCormack C. G., Born W., Irvine P. J., Achterberg E. P., Amano T., Ardron J., Blackstock J. J., Foster P. N., Gattuso J.-P., Hawkins S. J., Hendy E., Kissling W. D., Lluch-Cota S. E., Murphy E. J., Ostle N., Owens N., Perry R. I., Pörtner H.-O., Scholes R. J., Schurr F. M., Schweiger O., Settele J., Smith R. K., Smith S., Thompson J., Tittensor D. P., van Kleunen M., Vivian C., Vohland K., Warren R., Watkinson A., Widdicombe S., Williamson P., Woods E. & Sutherland W. J., 2016. Key impacts of climate engineering on biodiversity and ecosystems, with priorities for future research. *Journal of Integrative Environmental Sciences* 13:103-128.

Moya A., Howes E. L., Lacoue-Labarthe T., Forêt S., Hanna B., Medina M., Munday P. L., Ong J.-S., Teyssié J.-L., Torda G., Watson S.-A., Miller D. J., Bijma J. & Gattuso J.-P., 2016. Near-future pH conditions severely impact calcification, metabolism and the nervous system in the pteropod *Heliconoides inflatus*. *Global Change Biology* 22:3888-3900.

Nash M. C., Martin S. & Gattuso J.-P., 2016. Mineralogical response of the Mediterranean crustose coralline alga *Lithophyllum cabiochae* to near-future ocean acidification and warming. *Biogeosciences* 13:5937-5945.

Yang Y., Hansson L. & Gattuso J.-P., 2016. Data compilation on the biological response to ocean acidification: an update. *Earth System Science Data* 8:79-87.

2017 Cox E., Diaz-Castañeda V., Martin S., Alliouane S., Mahacek P., Le Fur A., Gattuso J.-P. & Gazeau F., 2017. Effects of *in situ* CO_2 enrichment on epibiont settlement within a *Posidonia oceanica* meadow. *Journal of Experimental Marine Biology and Ecology* 497:197-211.

Cox T., Nash M., Gazeau F., Daniel M., Legrand E., Alliouane S., Mahacek P., Le Fur A., Gattuso J.-P. & Martin S., 2017. Effects of *in situ* CO_2 enrichment on *Posidonia oceanica* epiphytic community composition and mineralogy. *Marine Biology* 164:103.

Howes E. L., Eagle R., Gattuso J.-P. & Bijma J., 2017. Comparison of Mediterranean pteropod shell biometrics and ultrastructure from historical (1910 and 1921) and present day (2012) samples provides baseline for monitoring effects of global change. *PLoS ONE* 12:e0167891.

Howes E. L., Kaczmarek K., Raitzsch M., Mewes A., Bijma N., Horn I., Misra S., Gattuso J.-P. & Bijma J., 2017. Decoupled carbonate chemistry controls on the incorporation of boron into *Orbulina universa*. *Biogeosciences* 14:415-430.

Kapsenberg L., Alliouane S., Gazeau F., Mousseau L. & Gattuso J.-P., 2017. Coastal ocean acidification and increasing total alkalinity in the northwestern Mediterranean Sea. *Ocean Science* 13:411-426.

Maugendre L., Gattuso J.-P., de Kluijver A., Soetaert K., van Oevelen D., Middelburg J. J. & Gazeau F., 2017. Carbon-13 labelling shows no effect of ocean acidification on carbon transfer in Mediterranean plankton communities. *Estuarine, Coastal and Shelf Science* 186A:100-111.

Maugendre L., Gattuso J.-P., Poulton A. J., Dellisanti W., Gaubert M., Guieu C. & Gazeau F., 2017. No detectable effect of ocean acidification on plankton metabolism in the NW oligotrophic Mediterranean Sea: results from two mesocosm studies. *Estuarine, Coastal and Shelf Science* 186A:89-99.

Maugendre L., Guieu C., Gattuso J.-P. & Gazeau F., 2017. Ocean acidification in the Mediterranean Sea: pelagic mesocosm experiments. A synthesis. *Estuarine, Coastal and Shelf Science* 186A:1-10.

Sauzède R., Claustre H., Pasqueron de Fommervault O., Bittig H., Gattuso J.-P., Legendre L. & Johnson K., 2017. Estimates of water-column nutrients concentration and carbonate system parameters in the global ocean: A novel approach based on neural networks. *Frontiers in Marine Science* 4:128.

Kapsenberg L., Bockmon E. E., Bresnahan P. J., Kroeker K., Gattuso J.-P. & Martz T. R., 2017.

Advancing ocean acidification biology using Durafet® pH electrodes. *Frontiers in Marine Science* 4:321.

2018 Asnaghi V., Collard M., Mangialajo L., Gattuso J.-P. & Dubois P., in press. Bottom-up effects on plate biomechanical properties of sea urchins in an acidified ocean scenario. *Marine Environmental Research* .

Bischof K., Convey P., Duarte P., Gattuso J.-P., Granberg M., Hop H., Hoppe C., Jimenez C., Lisitsyn L., Martinez B., Roleda M. Y., Thor P., Wiktor J. M. & Gabrielsen G. W., in press. Kongsfjorden as harbinger of the future Arctic: knowns, unknowns and research priorities. In: Hop H. & Wiencke C. (Eds.), *The Ecosystem of Kongsfjorden, Svalbard*, pp.

Bittig H. C., Steinhoff T., Claustre H., Fiedler B., Williams N. L., Sauzède R., Körtzinger A. & Gattuso J.-P., 2018. An alternative to static climatologies: robust estimation of open ocean CO2 variables and nutrient concentrations from T, S, and O_2 data using Bayesian neural networks. *Frontiers in Marine Science* 5:328.

Boyd P. W., Collins S., Dupont S., Fabricius K., Gattuso J. P., Havenhand J., Hutchins D. A., Riebesell U., Rintoul M. S., Vichi M., Biswas H., Ciotti A., Gao K., Gehlen M., Hurd C. L., Kurihara H., McGraw C. M., Navarro J. M., Nilsson G. E., Passow U. & Pörtner H.-O., 2018. Experimental strategies to assess the biological ramifications of multiple drivers of global ocean change - a review. *Global Change Biology* 24:2239-2261.

Cramer W., Guiot J., Fader M., Garrabou J., Gattuso J.-P., Iglesias A., Lange M. A., Lionello P., Llasat M. C., Paz S., Peñuelas J., Snoussi M., Toreti A., Tsimplis M. N. & Xoplaki E., 2018. Climate change and interconnected risks to sustainable development in the Mediterranean. *Nature Climate Change* 8:972-980.

Cyronak T., Andersson A. J., Langdon C., Albright R., Bates N. R., Caldeira K., Carlton R., Corredor J. E., Dunbar R. B., Enochs I., Erez J., Eyre B., Gattuso J.-P., Gledhill D., Kayanne H., Kline D. I., Kopek D. A., Lantz C., Lazar B., Manzello D., McMahon A., Meléndez M., Page H. N., Santos I. R., Shaw E., Silverman J., Suzuki A., Teneva L., Watanabe A. & Yamamoto S., 2018. Taking the biogeochemical pulse of the world's coral reefs. *PLoS ONE* 13:e0190872.

Gattuso J.-P., Magnan A. K., Bopp L., Cheung W. W. L., Duarte C. M., Hinkel J., Mcleod E., Micheli F., Oschlies A., Williamson P., Billé R., Chalastani V. I., Gates R. D., Irisson J.-O., Middelburg J. J., Pörtner H.-O. & Rau G. H., 2018. Ocean solutions to address climate change and its effects on marine ecosystems. *Frontiers in Marine Science* 5:337.

Hoegh-Guldberg O., Jacob D., Taylor M., Bindi M., Brown S., Camilloni I., Diedhiou A., Djalante R., Ebi K., Engelbrecht F., Guiot J., Hijioka Y., Mehrotra S., Payne A., Seneviratne S. I., Thomas A., Warren R. & Zhou G. [J.-P. Gattuso contributing author], 2018. Impacts of 1.5°C global warming on natural and human systems. In: Masson-Delmotte V., Zhai P., Pörtner H.-O., Roberts D., Skea J., Shukla P. R., Pirani A., Moufouma-Okia W., Péan C., Pidcock R., Connors S., Matthews J. B. R., Chen Y., Zhou X., Gomis M. I., Lonnoy E., Maycock T., Tignor M. & Waterfield T. (Eds.), *Global warming of 1.5° C. An IPCC Special Report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*, pp. 175-311. Geneva: Intergovernmental Panel on Climate Change.

Kapsenberg L., Miglioli A., Bitter M. C., Tambutté E., Dumollard R. & Gattuso J.-P., 2018. Ocean pH fluctuations affect mussel larvae at key developmental transitions. *Proceedings of the Royal Society of London. Series B: Biological Sciences* 285:20182381.

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Maier C., Weinbauer M. & Gattuso J.-P., in press. Fate of Mediterranean cold water corals in light of global change: a synthesis. In: Orejas C. & Jiménez C. (Eds.), *Past, present and future of Mediterranean cold-water corals*. Springer.

Orr J. C., Epitalon J.-M., Dickson A. G. & Gattuso J.-P., 2018. Routine uncertainty propagation for the marine carbon dioxide system. *Marine Chemistry* 207:84-107.

Riou V., Para J., Garel M., Guigue C., Al Ali B., Santinelli C., Lefèvre D., Gattuso J.-P., Goutx M., Jacquet S., Le Moigne F., Tachikawa K. & Tamburini C., 2018. Biodegradation of Emiliania huxleyi aggregates by a natural Mediterranean prokaryotic community under increasing hydrostatic

pressure. *Progress in Oceanography* 163:271-281.