

REFERENCES

- Agnihotri, R., Bhattacharya, S. K., Sarin, M. M., & Somayajulu, B. L. K. (2003). Changes in surface productivity and subsurface denitrification during the Holocene: a multiproxy study from the eastern Arabian Sea. *The Holocene*, 13(5), 701-713.
- Altabet, M. A., Francois, R., Murray, D. W., & Prell, W. L. (1995). Climate-related variations in denitrification in the Arabian Sea from sediment $^{15}\text{N}/^{14}\text{N}$ ratios. *Nature*, 373(6514), 506-509.
- Altabet, M. A., Higginson, M. J., & Murray, D. W. (2002). The effect of millennial-scale changes in Arabian Sea denitrification on atmospheric CO_2 . *Nature*, 415(6868), 159-162.
- Altabet, M. A., Murray, D. W., & Prell, W. L. (1999). Climatically linked oscillations in Arabian Sea denitrification over the past 1 my: Implications for the marine N cycle. *Paleoceanography*, 14(6), 732-743.
- Altabet, M.A. (2006). Isotopic tracers of the marine nitrogen cycle: present and past. In *Marine organic matter: biomarkers, isotopes and DNA* (pp. 251-293). Springer Berlin Heidelberg.
- Altabet, M.A. (2007). Constrains on oceanic N balance/imbalance from sedimentary ^{15}N records, *15 Biogeosciences*, 4, 75–86.
- Amin, B. S., Lal, D., & Somayajulu, B. L. K. (1975). Chronology of marine sediments using the ^{10}Be method: intercomparison with other methods. *Geochimica et Cosmochimica Acta*, 39(8), 1187-1192.
- Anand, P., Kroon, D., Singh, A. D., Ganeshram, R. S., Ganssen, G., & Elderfield, H. (2008). Coupled sea surface temperature–seawater $\delta^{18}\text{O}$ reconstructions in the Arabian Sea at the millennial scale for the last 35 ka, *Paleoceanography*, 23, PA4207.
- Annamalai, H., & Liu, P. (2005). Response of the Asian summer monsoon to changes in El Nino properties, *Quarterly Journal of the Royal Meteorological Society*, 131, 805-831.
- Arnarson, T. S., & Keil, R. G. (2007). Changes in organic matter–mineral interactions for marine sediments with varying oxygen exposure times. *Geochimica et Cosmochimica Acta*, 71(14), 3545-3556.

- Arpe, K., Dümenil, L., & Giorgetta, M. A. (1998). Variability of the Indian monsoon in the ECHAM3 model: Sensitivity to sea surface temperature, soil moisture, and the stratospheric quasi-biennial oscillation. *Journal of climate*, 11(8), 1837-1858.
- Balaji, D., Bhushan, R., & Chamyal, L. S. (2018). Variations of the Somali upwelling since 18.5 ka BP and its relationship with southwest monsoon rainfall. *Climate of the Past*, 14(9), 1331-1343.
- Bamzai, A. S., & Shukla, J. (1999). Relation between Eurasian snow cover, snow depth, and the Indian summer monsoon: An observational study. *Journal of Climate*, 12(10), 3117-3132.
- Banerjee, P., & Prasanna Kumar, S. (2014). Dust-induced episodic phytoplankton blooms in the Arabian Sea during winter monsoon. *Journal of Geophysical Research: Oceans*, 119(10), 7123-7138.
- Bange, H. W., Naqvi, S. W. A., & Codispoti, L. A. (2005). The nitrogen cycle in the Arabian Sea. *Progress in Oceanography*, 65(2), 145-158.
- Beal, L. M., & Chereskin, T. K. (2003). The volume transport of the Somali Current during the 1995 southwest monsoon, *Deep Sea Research Part II: Topical Studies in Oceanography*, 50, 2077-2089.
- Berger, A. (1988). Milankovitch theory and climate. *Reviews of geophysics*, 26(4), 624-657.
- Berger, W. H. (1978). Deep-sea carbonate: pteropod distribution and the aragonite compensation depth. *Deep Sea Research*, 25(5), 447-452.
- Berrisford, P., Kållberg, P., Kobayashi, S., Dee, D., Uppala, S., Simmons, A., Poli, P., & Sato, H. (2011). Atmospheric conservation properties in ERA-Interim, *Quarterly Journal of the Royal Meteorological Society*, 137, 1381-1399.
- Bhushan, R., Dutta, K., & Somayajulu, B. L. K. (2001). Concentrations and burial fluxes of organic and inorganic carbon on the eastern margins of the Arabian Sea. *Marine Geology*, 178(1), 95-113.
- Bhushan, R., Dutta, K., Mulsow, S., Povinec, P. P., & Somayajulu, B. L. K. (2003). Distribution of natural and man-made radionuclides during the reoccupation of GEOSECS stations 413 and 416 in the Arabian Sea: temporal changes. *Deep Sea Research Part II: Topical Studies in Oceanography*, 50(17-21), 2777-2784.

- Böll, A., Schulz, H., Munz, P., Rixen, T., Gaye, B., & Emeis, K. C. (2015). Contrasting sea surface temperature of summer and winter monsoon variability in the northern Arabian Sea over the last 25ka. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 426, 10-21.
- Bourget, J., Zaragosi, S., Rodriguez, M., Fournier, M., Garlan, T., & Chamot-Rooke, N. (2013). Late Quaternary megaturbidites of the Indus Fan: Origin and stratigraphic significance. *Marine Geology*, 336, 10-23.
- Broccoli, A. J. (2000). Tropical cooling at the Last Glacial Maximum: An atmosphere–mixed layer ocean model simulation. *Journal of Climate*, 13(5), 951-976.
- Brock, J. C., McClain, C. R., Luther, M. E., & Hay, W. W. (1991). The phytoplankton bloom in the northwestern Arabian Sea during the southwest monsoon of 1979. *Journal of Geophysical Research: Oceans*, 96(C11), 20623-20642.
- Broecker, W. S., & Peng, T. H. (1982). *Tracers in the Sea* (Vol. 690). Palisades, New York: Lamont-Doherty Geological Observatory, Columbia University.
- Broecker, W., Mix, A., Andree, M., & Oeschger, H. (1984). Radiocarbon measurements on coexisting benthic and planktic foraminifera shells: potential for reconstructing ocean ventilation times over the past 20 000 years. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, 5(2), 331-339.
- Brunner, B., Contreras, S., Lehmann, M.F., Matantseva, O., Rollog, M., Kalvelage, T., Klockgether, G., Lavik, G., Jetten, M.S., Kartal, B. & Kuypers, M.M. (2013). Nitrogen isotope effects induced by anammox bacteria. *Proceedings of the National Academy of Sciences*, 110(47), pp.18994-18999.
- Burbank, D. W., Leland, J., Fielding, E., Anderson, R. S., Brozovic, N., Reid, M. R., & Duncan, C. (1996). Bedrock incision, rock uplift and threshold hillslopes in the northwestern Himalayas. *Nature*, 379(6565), 505-510.
- Burckle, L. H. (1989). Distribution of diatoms in sediments of the northern Indian Ocean: Relationship to physical oceanography, *Marine Micropaleontology*, 15, 53-65.
- Carter, S. J., & Colman, S. M. (1994). Biogenic silica in Lake Baikal sediments: results from 1990–1992 American cores, *Journal of Great Lakes Research*, 20, 751-760.
- Chave, K. E. (1954). Aspects of the biogeochemistry of magnesium 1. Calcareous marine organisms. *The Journal of Geology*, 62(3), 266-283.
- CIESIN, I. (2004). WRI, 2000. Gridded Population of the World (GPW), version 2. Center for International Earth Science Information Network (CIESIN) Columbia University,

International Food Policy Research Institute (IFPRI) and World Resources Institute (WRI), Palisades, NY, 900.

- Clark, C. O., Cole, J. E., & Webster, P. J. (2000). Indian Ocean SST and Indian summer rainfall: Predictive relationships and their decadal variability. *Journal of Climate*, 13(14), 2503-2519.
- Clark, I. D., & Fontes, J. C. (1990). Paleoclimatic reconstruction in northern Oman based on carbonates from hyperalkaline groundwaters. *Quaternary Research*, 33(3), 320-336.
- Clark, P. U., Dyke, A. S., Shakun, J. D., Carlson, A. E., Clark, J., Wohlfarth, B., Jerry X. Mitrovica, Steven W. Hostetler & McCabe, A. M. (2009). The last glacial maximum. *Science*, 325(5941), 710-714.
- Clemens, S. C., Prell, W. L., & Howard, W. R. (1987). Retrospective dry bulk density estimates from southeast Indian Ocean sediments—comparison of water loss and chloride-ion methods, *Marine geology*, 76, 57-69.
- Clemens, S., Prell, W., Murray, D., Shimmield, G., & Weedon, G. (1991). Forcing mechanisms of the Indian Ocean monsoon. *Nature*, 353(6346), 720-725.
- Clift, P. D., & Giosan, L. (2014). Sediment fluxes and buffering in the post-glacial Indus Basin. *Basin Research*, 26(3), 369-386.
- Clift, P. D., Giosan, L., Henstock, T. J., & Tabrez, A. R. (2014). Sediment storage and reworking on the shelf and in the canyon of the Indus River-fan system since the last glacial maximum. *Basin Research*, 26(1), 183-202.
- Clift, P. D., Shimizu, N., Layne, G. D., Blusztajn, J. S., Gaedicke, C., Schluter, H. U., Clark, M.K. & Amjad, S. (2001). Development of the Indus Fan and its significance for the erosional history of the Western Himalaya and Karakoram. *Geological Society of America Bulletin*, 113(8), 1039-1051.
- Conan, S. H., & Brummer, G. J. A. (2000). Fluxes of planktic foraminifera in response to monsoonal upwelling on the Somalia Basin margin. *Deep Sea Research Part II: Topical Studies in Oceanography*, 47(9-11), 2207-2227.
- Conley, D. J. (1988). Biogenic silica as an estimate of siliceous microfossil abundance in Great Lakes sediments. *Biogeochemistry*, 6(3), 161-179.
- Conley, D. J., & Schelske, C. L. (1993). Potential role of sponge spicules in influencing the silicon biogeochemistry of Florida lakes. *Canadian Journal of Fisheries and Aquatic Sciences*, 50(2), 296-302.

- Coumes, F., & Kolla, V. (1984). Channel Migration in Upper Indus Fan in Relation to Geologic History of Region. *AAPG Bulletin*, 68(4), 466-466.
- Dadson, S. J., & Church, M. (2005). Postglacial topographic evolution of glaciated valleys: a stochastic landscape evolution model. *Earth Surface Processes and Landforms: The Journal of the British Geomorphological Research Group*, 30(11), 1387-1403.
- Dahl, K. A., & Oppo, D. W. (2006). Sea surface temperature pattern reconstructions in the Arabian Sea. *Paleoceanography*, 21, PA1014.
- Dearing, J. A., Dann, R. J. L., Hay, K., Lees, J. A., Loveland, P. J., Maher, B. A., & O'grady, K. (1996). Frequency-dependent susceptibility measurements of environmental materials. *Geophysical Journal International*, 124(1), 228-240.
- Deutsch, C., Sarmiento, J. L., Sigman, D. M., Gruber, N., & Dunne, J. P. (2007). Spatial coupling of nitrogen inputs and losses in the ocean. *Nature*, 445(7124), 163.
- Dey, S., Thiede, R. C., Schildgen, T. F., Wittmann, H., Bookhagen, B., Scherler, D., Vikrant Jain & Strecker, M. R. (2016). Climate-driven sediment aggradation and incision since the late Pleistocene in the NW Himalaya, India. *Earth and Planetary Science Letters*, 449, 321-331.
- Dixit, S., Van Cappellen, P., & van Bennekom, A. J. (2001). Processes controlling solubility of biogenic silica and pore water build-up of silicic acid in marine sediments. *Marine Chemistry*, 73(3-4), 333-352.
- Dutta K, Bhushan R, & Somayajulu B.L.K. (2001). ΔR correction values for the northern Indian Ocean. *Radiocarbon*. 43, 483-488.
- Emerson, S. & Bender, M. (1981). Carbon fluxes at the sediment water interface of the deep-sea: calcium carbonate preservation. *J. Mar. Res.*, 39: 139-162.
- Emerson, S., & Hedges, J. I. (1988). Processes controlling the organic carbon content of open ocean sediments. *Paleoceanography*, 3(5), 621-634.
- Emiliani, C. (1955). Mineralogical and chemical composition of the tests of certain pelagic foraminifera. *Micropaleontology*, 377-380.
- Falkowski, P. G., R. T. Barber, & V. Smetacek (1998), Biogeochemical controls and feedbacks on ocean primary production, *Science*, 281(5374), 200–206
- Findlater, J. (1978). Observational aspects of the low-level cross-equatorial jet stream of the western Indian Ocean, in: *Monsoon Dynamics*, Springer, 1251-1262.

- Fischer, A.S., Weller, R.A., Rudnick, D.L., Eriksen, C.C., Lee, C.M., Brink, K.H., Fox, C.A. & Leben, R.R. (2002). Mesoscale eddies, coastal upwelling, and the upper-ocean heat budget in the Arabian Sea. *Deep Sea Research Part II: Topical Studies in Oceanography*, 49(12), pp.2231-2264.
- Fleitmann, D., Burns, S. J., Mangini, A., Mudelsee, M., Kramers, J., Villa, I., Neff, U., Al-Subbary, A. A., Buettner, A., & Hippler, D. (2007). Holocene ITCZ and Indian monsoon dynamics recorded in stalagmites from Oman and Yemen (Socotra), *Quaternary Science Reviews*, 26, 170-188.
- Frakes, L. A., Francis, J. E., & Syktus, J. I. (1992). Climate modes of the Phanerozoic (p. 286).
- Francois, R., Honjo, S., Manganini, S. J., & Ravizza, G. E. (1995). Biogenic barium fluxes to the deep sea: Implications for paleoproductivity reconstruction. *Global Biogeochemical Cycles*, 9(2), 289-303.
- Gadgil, S., & Gadgil, S. (2006). The Indian monsoon, GDP and agriculture. *Economic and political weekly*, 4887-4895.
- Galbraith ED, Kienast M, Albuquerque AL, Altabet MA, Batista F, Bianchi D, Calvert SE, Contreras S, Crosta X, De Pol-Holz R, & Dubois N. (2013). The acceleration of oceanic denitrification during deglacial warming. *Nature Geoscience*, 1; 6 (7):579.
- Galloway, J.N., Dentener, F.J., Capone, D.G., Boyer, E.W., Howarth, R.W., Seitzinger, S.P., Asner, G.P., Cleveland, C.C., Green, P.A., Holland, E.A. & Karl, D.M., (2004). Nitrogen cycles: past, present, and future. *Biogeochemistry*, 70(2), pp.153-226.
- German, C. R., & Elderfield, H. (1990). Rare earth elements in the NW Indian Ocean. *Geochimica et Cosmochimica Acta*, 54(7), 1929-1940.
- Gimeno, L., Drumond, A., Nieto, R., Trigo, R. M., & Stohl, A. (2010). On the origin of continental precipitation. *Geophysical Research Letters*, 37, L13804.
- Giosan, L., Constantinescu, S., Clift, P. D., Tabrez, A. R., Danish, M., & Inam, A. (2006). Recent morphodynamics of the Indus delta shore and shelf. *Continental Shelf Research*, 26(14), 1668-1684.
- Goswami, B., Krishnamurthy, V., & Annmalai, H. (1999). A broad-scale circulation index for the interannual variability of the Indian summer monsoon, *Quarterly Journal of the Royal Meteorological Society*, 125, 611-633.

- Goswami, B., Madhusoodanan, M., Neema, C., & Sengupta, D. (2006). A physical mechanism for North Atlantic SST influence on the Indian summer monsoon, *Geophysical Research Letters*, 33, L02706.
- Govil, P., & Naidu, P. D. (2010). Evaporation-precipitation changes in the eastern Arabian Sea for the last 68 ka: Implications on monsoon variability, *Paleoceanography*, 25, PA1210
- Govindaraju, K. (1994). 1994 compilation of working values and sample description for 383 geostandards. *Geostandards Newsletter*, 18, 1-158.
- Gruber, N., & Sarmiento, J. L. (1997). Global patterns of marine nitrogen fixation and denitrification. *Global Biogeochemical Cycles*, 11(2), 235-266.
- Gupta, A. K., Anderson, D. M., & Overpeck, J. T. (2003). Abrupt changes in the Asian southwest monsoon during the Holocene and their links to the North Atlantic Ocean, *Nature*, 421, 354-357.
- Haake, B., Ittekkot, V., Rixen, T., Ramaswamy, V., Nair, R. R., & Curry, W. B. (1993). Seasonality and interannual variability of particle fluxes to the deep Arabian Sea. *Deep Sea Research Part I: Oceanographic Research Papers*, 40(7), 1323-1344.
- Hahn, D. G., & Shukla, J. (1976). An apparent relationship between Eurasian snow cover and Indian monsoon rainfall, *Journal of the Atmospheric Sciences*, 33, 2461-2462.
- Henrichs, S. M. & W. S. Reeburg (1987). Anaerobic mineralization of marine sediment organic matter: Rates and the role of anaerobic processes in the oceanic carbon economy, *Geomicrobiol. J.*, 5, 191-237.
- Hertzberg, J. E., Schmidt, M. W., Bianchi, T. S., Smith, R. W., Shields, M. R., & Marcantonio, F. (2016). Comparison of eastern tropical Pacific TEX₈₆ and Globigerinoides ruber Mg/Ca derived sea surface temperatures: Insights from the Holocene and Last Glacial Maximum. *Earth and Planetary Science Letters*, 434, 320-332.
- Hitchcock, G. L., Key, E. L., & Masters, J. (2000). The fate of upwelled waters in the Great Whirl, August 1995. *Deep Sea Research Part II: Topical Studies in Oceanography*, 47(7), 1605-1621.
- Hughen, K. A., Baillie, M. G., Bard, E., Beck, J. W., Bertrand, C. J., Blackwell, P. G., Buck, C.E., Burr, G.S., Cutler, K.B., Damon, P.E. & Weyhenmeyer, C. E. (2004). Marine04 marine radiocarbon age calibration, 0–26 cal kyr BP. *Radiocarbon*, 46(3), 1059-1086.

- Huguet, C., Kim, J. H., Sinninghe Damsté, J. S., & Schouten, S. (2006). Reconstruction of sea surface temperature variations in the Arabian Sea over the last 23 kyr using organic proxies (TEX₈₆ and U^{K'}₃₇), *Paleoceanography*, 21, PA3003.
- Hurd, D. C. (1973). Interactions of biogenic opal, sediment and seawater in the Central Equatorial Pacific, *Geochimica et cosmochimica acta*, 37, 2257-2282.
- Hutchins, D. A., & Bruland, K. W. (1998). Iron-limited diatom growth and Si: N uptake ratios in a coastal upwelling regime. *Nature*, 393(6685), 561-564.
- Ingall, E. D., & Van Cappellen, P. (1990). Relation between sedimentation rate and burial of organic phosphorus and organic carbon in marine sediments. *Geochimica et Cosmochimica Acta*, 54(2), 373-386.
- Isaji, Y., Kawahata, H., Ohkouchi, N., Ogawa, N. O., Murayama, M., Inoue, K., & Tamaki, K. (2015). Varying responses to Indian monsoons during the past 220 kyr recorded in deep-sea sediments in inner and outer regions of the Gulf of Aden, *Journal of Geophysical Research: Oceans*, 120, 7253-7270.
- Ivanochko, T. S., Ganeshram, R. S., Brummer, G. J. A., Ganssen, G., Jung, S. J., Moreton, S. G., & Kroon, D. (2005). Variations in tropical convection as an amplifier of global climate change at the millennial scale. *Earth and Planetary Science Letters*, 235(1-2), 302-314.
- Izumo, T., Montégut, C. B., Luo, J.-J., Behera, S. K., Masson, S., & Yamagata, T. (2008). The role of the western Arabian Sea upwelling in Indian monsoon rainfall variability, *Journal of Climate*, 21, 5603-5623.
- Jung, S. J. A., Davies, G. R., Ganssen, G. M., & Kroon, D. (2004). Synchronous Holocene sea surface temperature and rainfall variations in the Asian monsoon system. *Quaternary Science Reviews*, 23(20-22), 2207-2218.
- Kao, S. J., Wang, B. Y., Zheng, L. W., Selvaraj, K., Hsu, S. C., Sean Wan, X. H., Min Xu & Arthur Chen, C. T. (2015). Spatiotemporal variations of nitrogen isotopic records in the Arabian Sea. *Biogeosciences*, 12(1), 1-14.
- Karim, A., & Veizer, J. (2002). Water balance of the Indus River Basin and moisture source in the Karakoram and western Himalayas: Implications from hydrogen and oxygen isotopes in river water. *Journal of Geophysical Research: Atmospheres*, 107(D18), ACH-9.
- Kawamiya, M. (2001). Mechanism of offshore nutrient supply in the western Arabian Sea. *Journal of marine research*, 59(5), 675-696.

- Kim, J. H., Schouten, S., Hopmans, E. C., Donner, B., & Damsté, J. S. S. (2008). Global sediment core-top calibration of the TEX₈₆ paleothermometer in the ocean. *Geochimica et Cosmochimica Acta*, 72(4), 1154-1173.
- Kim, J. H., Van der Meer, J., Schouten, S., Helmke, P., Willmott, V., Sangiorgi, F., Koç, N., Hopmans, E.C. & Damsté, J. S. S. (2010). New indices and calibrations derived from the distribution of crenarchaeal isoprenoid tetraether lipids: Implications for past sea surface temperature reconstructions. *Geochimica et Cosmochimica Acta*, 74(16), 4639-4654.
- Kohfeld, K. E., & Harrison, S. P. (2001). DIRTMAP: the geological record of dust. *Earth-Science Reviews*, 54(1-3), 81-114.
- Koné, V., Aumont, O., Lévy, M., & Resplandy, L. (2009). Physical and biogeochemical controls of the phytoplankton seasonal cycle in the Indian Ocean: A modeling study. *Indian Ocean Biogeochemical Processes and Ecological Variability*, 147-166.
- Koning, E., Brummer, G.-J., Van Raaphorst, W., Van Bennekom, J., Helder, W., & Van Iperen, J. (1997). Settling, dissolution and burial of biogenic silica in the sediments off Somalia (northwestern Indian Ocean), *Deep Sea Research Part II: Topical Studies in Oceanography*, 44, 1341-1360.
- Koning, E., Van Iperen, J., Van Raaphorst, W., Helder, W., Brummer, G.-J., & Van Weering, T. (2001). Selective preservation of upwelling-indicating diatoms in sediments off Somalia, NW Indian Ocean, *Deep Sea Research Part I: Oceanographic Research Papers*, 48, 2473-2495.
- Krishnamurthy, L., & Krishnamurthy, V. (2016). Teleconnections of Indian monsoon rainfall with AMO and Atlantic tripole, *Climate Dynamics*, 46, 2269-2285.
- Krishnan, R., & Sugi, M. (2003). Pacific decadal oscillation and variability of the Indian summer monsoon rainfall, *Climate Dynamics*, 21, 233-242.
- Kumar, S. P., Madhupratap, M., Kumar, M. D., Muraleedharan, P. M., De Souza, S. N., Gauns, M., & Sarma, V. V. S. S. (2001). High biological productivity in the central Arabian Sea during the summer monsoon driven by Ekman pumping and lateral advection. *Current Science*, 1633-1638.
- Kumar, S. P., Ramaiah, N., Gauns, M., Sarma, V. V. S. S., Muraleedharan, P. M., Raghukumar, S., Dileep Kumar, M., & Madhupratap, M. (2001). Physical forcing of biological productivity in the Northern Arabian Sea during the Northeast Monsoon. *Deep Sea Research Part II: Topical Studies in Oceanography*, 48(6-7), 1115-1126.

- Lamble, K. J., & Hill, S. J. (1998). Microwave digestion procedures for environmental matrices. *Critical Review. Analyst*, 123(7), 103R-133R.
- Larrasoaña, J. C., Roberts, A. P., & Rohling, E. J. (2008). Magnetic susceptibility of eastern Mediterranean marine sediments as a proxy for Saharan dust supply?. *Marine Geology*, 254(3-4), 224-229.
- Lea, D. W. (2003). Elemental and isotopic proxies of past ocean temperatures. *The oceans and marine geochemistry*, 6, 365-390.
- Lee, C. (1992). Controls on organic carbon preservation: The use of stratified water bodies to compare intrinsic rates of decomposition in oxic and anoxic systems. *Geochimica et Cosmochimica Acta*, 56(8), 3323-3335.
- Lee, K. E., Kim, J. H., Wilke, I., Helmke, P., & Schouten, S. (2008). A study of the alkenone, TEX₈₆, and planktonic foraminifera in the Benguela Upwelling System: Implications for past sea surface temperature estimates. *Geochemistry, Geophysics, Geosystems*, 9(10), Q10019.
- Lehmann, M. F., Bernasconi, S. M., Barbieri, A., & McKenzie, J. A. (2002). Preservation of organic matter and alteration of its carbon and nitrogen isotope composition during simulated and in situ early sedimentary diagenesis. *Geochimica et Cosmochimica Acta*, 66(20), 3573-3584.
- Levine, R. C., & Turner, A. G. (2012). Dependence of Indian monsoon rainfall on moisture fluxes across the Arabian Sea and the impact of coupled model sea surface temperature biases. *Climate Dynamics*, 38(11), 2167-2190.
- Liao, X., Zhan, H., & Du, Y. (2016). Potential new production in two upwelling regions of the western Arabian Sea: Estimation and comparison. *Journal of Geophysical Research: Oceans*, 121(7), 4487-4502.
- Lopes dos Santos, R. A., Spooner, M. I., Barrows, T. T., De Deckker, P., Sinninghe Damsté, J. S., & Schouten, S. (2013). Comparison of organic (U^{K'}₃₇, TEX₈₆, LDI) and faunal proxies (foraminiferal assemblages) for reconstruction of late Quaternary sea surface temperature variability from offshore southeastern Australia. *Paleoceanography*, 28(3), 377-387.
- Maher, B. A., & Thompson, R. (1995). Paleorainfall reconstructions from pedogenic magnetic susceptibility variations in the Chinese loess and paleosols. *Quaternary Research*, 44(3), 383-391.
- Mangerud, J. (1972). Radiocarbon dating of marine shells, including a discussion of apparent age of recent shells from Norway. *Boreas*, 1(2), 143-172.

- Mari Xavier, Beauvais Sophie, Lemée, Rodolphe & Pedrotti Maria Luiza (2001). Non-Redfield C:N ratio of transparent exopolymeric particles in the northwestern Mediterranean Sea, *Limnology and Oceanography*, 46 (7), 1831-1836.
- Martin, J. H. (1990). Glacial-interglacial CO₂ change: The iron hypothesis. *Paleoceanography*, 5(1), 1-13.
- McLennan, S. M. (2001). Relationships between the trace element composition of sedimentary rocks and upper continental crust. *Geochemistry, Geophysics, Geosystems*, 2(4), 2000GB0001009.
- Milliman, J. D., Qinchun, X., & Zuosheng, Y. (1984). Transfer of particulate organic carbon and nitrogen from the Yangtze River to the ocean. *American Journal of Science*, 284(7), 824-834.
- Möbius, J., Gaye, B., Lahajnar, N., Bahlmann, E., & Emeis, K. C. (2011). Influence of diagenesis on sedimentary $\delta^{15}\text{N}$ in the Arabian Sea over the last 130kyr. *Marine Geology*, 284(1), 127-138.
- Mooley, D., Parthasarathy, B., & Pant, G. (1986). Relationship between Indian Summer Monsoon Rainfall and Location of the Ridge at the 500-mb Level along 75° E, *Journal of climate and applied meteorology*, 25, 633-640.
- Mortlock, R. A., & Froelich, P. N. (1989). A simple method for the rapid determination of biogenic opal in pelagic marine sediments, *Deep Sea Research Part A. Oceanographic Research Papers*, 36, 1415-1426.
- Muller, P. J., & E. Suess (1979). Productivity, sedimentation rate, and sedimentary organic matter in the ocean, I, Organic carbon preservation, *Deep Sea Res.*, 26, 1347-1367.
- Murray, R. W., & Leinen, M. (1996). Scavenged excess aluminum and its relationship to bulk titanium in biogenic sediment from the central equatorial Pacific Ocean. *Geochimica et Cosmochimica Acta*, 60(20), 3869-3878.
- Murray, R. W., Leinen, M., & Isern, A. (1993). Biogenic flux of Al to sediment in the central equatorial Pacific Ocean: Evidence for increased productivity during glacial periods. *Paleoceanography*, 8(5), 651-670.
- Naidu, P. D., & Malmgren, B. A. (1996). A high-resolution record of late Quaternary upwelling along the Oman Margin, Arabian Sea based on planktonic foraminifera, *Paleoceanography*, 11, 129-140.

- Naidu, P. D., Singh, A. D., Ganeshram, R., & Bharti, S. K. (2014). Abrupt climate-induced changes in carbonate burial in the Arabian Sea: Causes and consequences. *Geochemistry, Geophysics, Geosystems*, 15(4), 1398-1406.
- Naik, S. S., Godad, S. P., Naidu, P. D., & Ramaswamy, V. (2013). A comparison of *Globigerinoides ruber* calcification between upwelling and non-upwelling regions in the Arabian Sea. *Journal of Earth System Science*, 122(4), 1153-1159.
- Nair, T. B., Ittekkot, V., Shankar, R., & Guptha, M. V. S. (2005). Settling barium fluxes in the Arabian Sea: critical evaluation of relationship with export production. *Deep Sea Research Part II: Topical Studies in Oceanography*, 52(14-15), 1930-1946.
- Nair, T. B., Ramaswamy, V., Shankar, R., & Ittekkot, V. (1999). Seasonal and spatial variations in settling manganese fluxes in the Northern Arabian Sea. *Deep Sea Research Part I: Oceanographic Research Papers*, 46(10), 1827-1839.
- Naqvi, S. W. A. (1987). Some aspects of the oxygen-deficient conditions and denitrification in the Arabian Sea. *Journal of Marine Research*, 45(4), 1049-1072.
- Naqvi, S. W. A. (1994). Denitrification processes in the Arabian Sea. *Proceedings of the Indian Academy of Sciences-Earth and Planetary Sciences*, 103(2), 279-300.
- Naqvi, S. W. A., Moffett, J. W., Gauns, M. U., Narvekar, P. V., Pratihary, A. K., Naik, H., Shenoy, D.M., Jayakumar, D.A., Goepfert, T.J., Patra, P.K. & Ahmed, S. I. (2010). The Arabian Sea as a high-nutrient, low-chlorophyll region during the late Southwest Monsoon. *Biogeosciences*, 7(7), 2091-2100.
- Naqvi, S.W.A., Yoshinari, T., Brandes, J.A., Devol, A.H., Jayakumar, D.A., Narvekar, P.V., Altabet, M.A. & Codispoti, L.A. (1998). Nitrogen isotopic studies in the sub oxic Arabian Sea. *Proceedings-Indian Academy of Sciences, Earth and Planetary Sciences*, 107, pp.367-378.
- Ninomiya, K., & Kobayashi, C. (1999). Precipitation and Moisture Balance of the Asian Summer Monsoon in 1991, *Journal of the Meteorological Society of Japan. Ser. II*, 77, 77-99.
- Overpeck, J., Anderson, D., Trumbore, S., & Prell, W. (1996). The southwest Indian Monsoon over the last 18 000 years. *Climate Dynamics*, 12(3), 213-225.
- Pant, G. B., & Kumar, K. R. (1997). *Climates of south Asia*, John Wiley & Sons.
- Parthasarathy, B., Diaz, H., & Eischeid, J. (1988). Prediction of all-India summer monsoon rainfall with regional and large-scale parameters, *Journal of Geophysical Research: Atmospheres*, 93, 5341-5350.

- Parthasarathy, B., Kumar, K. R., & Munot, A. (1991). Evidence of secular variations in Indian monsoon rainfall–circulation relationships, *Journal of Climate*, 4, 927-938.
- Pattan, J. N., Mir, I. A., Parthiban, G., Karapurkar, S. G., Matta, V. M., Naidu, P. D., & Naqvi, S. W. A. (2013). Coupling between suboxic condition in sediments of the western Bay of Bengal and southwest monsoon intensification: A geochemical study. *Chemical Geology*, 343, 55-66.
- Paytan, A., & Griffith, E. M. (2007). Marine barite: Recorder of variations in ocean export productivity. *Deep Sea Research Part II: Topical Studies in Oceanography*, 54(5-7), 687-705.
- Peterson, L. C., & Prell, W. L. (1985). Carbonate dissolution in recent sediments of the eastern equatorial Indian Ocean: preservation patterns and carbonate loss above the lysocline. *Marine Geology*, 64(3-4), 259-290.
- Phillips, W. M., Sloan, V. F., Shroder Jr, J. F., Sharma, P., Clarke, M. L., & Rendell, H. M. (2000). Asynchronous glaciation at Nanga Parbat, northwestern Himalaya Mountains, Pakistan. *Geology*, 28(5), 431-434.
- Pichevin, L., Bard, E., Martinez, P., & Billy, I. (2007). Evidence of ventilation changes in the Arabian Sea during the late Quaternary: Implication for denitrification and nitrous oxide emission. *Global Biogeochemical Cycles*, 21(4), GB4008.
- Prahl, F. G., & Wakeham, S. G. (1987). Calibration of unsaturation patterns in long-chain ketone compositions for palaeotemperature assessment. *Nature*, 330(6146), 367-369.
- Prell, W. L., Murray, D. W., Clemens, S. C., & Anderson, D. M. (1992). Evolution and variability of the Indian Ocean summer monsoon: evidence from the western Arabian Sea drilling program. Washington DC American Geophysical Union Geophysical Monograph Series, 70, 447-469.
- Qasim, S.Z. (1997). Biological productivity of the Indian Ocean, *Indian Journal of Marine Sciences*, 6, 122-137.
- Ragueneau, O., Leynaert, A., Tréguer, P., Demaster, D. J., & Anderson, R. F. (1996). Opal studied as a marker of paleoproductivity. *Eos, Transactions American Geophysical Union*, 77(49), 491-491.
- Rajeevan, M., Unnikrishnan, C. K., & Preethi, B. (2012). Evaluation of the ENSEMBLES multi-model seasonal forecasts of Indian summer monsoon variability. *Climate Dynamics*, 38(11), 2257-2274.

- Ramaswamy, V., & Gaye, B. (2006). Regional variations in the fluxes of foraminifera carbonate, coccolithophorid carbonate and biogenic opal in the northern Indian Ocean, Deep Sea Research Part I: Oceanographic Research Papers, 53, 271-293.
- Ravishankara A.R., Daniel J.S. & Portmann R.W. (2009). Nitrous oxide (N₂O): the dominant ozone-depleting substance emitted in the 21st century. Science, 326,123-5.
- Rea, D. K. (1994). The paleoclimatic record provided by eolian deposition in the deep sea: The geologic history of wind. Reviews of Geophysics, 32(2), 159-195.
- Reichart, G. J., Lourens, L. J., & Zachariasse, W. J. (1998). Temporal variability in the northern Arabian Sea Oxygen Minimum Zone (OMZ) during the last 225,000 years. Paleoceanography, 13(6), 607-621.
- Reichart, Gert-Jan, Lourens, Lucas Joost, & Zachariasse, Willem-Jan (1998): Organic carbon content, stable isotopes and planktonic foraminifera in sediments of the northern Arabian Sea oxygen minimum zone. PANGAEA, <https://doi.org/10.1594/PANGAEA.857398>, Supplement to: Reichart, G-J et al. (1998): Temporal variability in the northern Arabian Sea oxygen minimum zone (OMZ) during the last 225,000 years. Paleoceanography, 13(6), 607-621.
- Reimer, P. J., Baillie, M. G., Bard, E., Bayliss, A., Beck, J. W., Blackwell, P. G., Ramsey, C.B., Buck, C.E., Burr, G.S., Edwards, R.L. & Friedrich, M. (2009). IntCal09 and Marine09 radiocarbon age calibration curves, 0–50,000 years cal BP. Radiocarbon, 51(4), 1111-1150.
- Reimer, P.J., Bard, E., Bayliss, A., Beck, J.W., Blackwell, P.G., Ramsey, C.B., Buck, C.E., Cheng, H., Edwards, R.L., Friedrich, M. & Grootes, P.M. (2013). IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP. Radiocarbon, 55(4), pp.1869-1887.
- Robinson, R.S., Kienast, M., Luiza Albuquerque, A., Altabet, M., Contreras, S., De Pol Holz, R., Dubois, N., Francois, R., Galbraith, E., Hsu, T.C. & Ivanochko, T. (2012). A review of nitrogen isotopic alteration in marine sediments. Paleoceanography, 27(4), PA4203.
- Saher, M., Jung, S., Elderfield, H., Greaves, M., & Kroon, D. (2007). Sea surface temperatures of the western Arabian Sea during the last deglaciation, Paleoceanography, 22, PA2208.
- Sarkar, A., Ramesh, R., Somayajulu, B. L. K., Agnihotri, R., Jull, A. J. T., & Burr, G. S. (2000). High resolution Holocene monsoon record from the eastern Arabian Sea. Earth and Planetary Science Letters, 177(3-4), 209-218.

- Schott, F. A., & McCreary Jr, J. P. (2001). The monsoon circulation of the Indian Ocean. *Progress in Oceanography*, 51(1), 1-123.
- Schott, F. A., Xie, S. P., & McCreary, J. P. (2009). Indian Ocean circulation and climate variability, *Reviews of Geophysics*, 47, RG1002.
- Schott, F., Swallow, J. C., & Fieux, M. (1990). The Somali Current at the equator: annual cycle of currents and transports in the upper 1000 m and connection to neighbouring latitudes, *Deep Sea Research Part A. Oceanographic Research Papers*, 37, 1825-1848.
- Schulz, H., von Rad, U., & Erlenkeuser, H. (1998). Correlation between Arabian Sea and Greenland climate oscillations of the past 110,000 years. *Nature*, 393(6680), 54-57.
- Schwandes, L. P. (1998). Environmental durability of biogenic opal. *Soil Crop Sci. Soc. Florida Proceedings*, 57: 36–39.
- Seki, O., Bendle, J. A., Harada, N., Kobayashi, M., Sawada, K., Moossen, H., Inglis, G.N., Nagao, S. & Sakamoto, T. (2014). Assessment and calibration of TEX₈₆ paleothermometry in the Sea of Okhotsk and sub-polar North Pacific region: Implications for paleoceanography. *Progress in Oceanography*, 126, 254-266.
- Shukla, J. (1975). Effect of Arabian sea-surface temperature anomaly on Indian summer monsoon: A numerical experiment with the GFDL model. *Journal of Atmospheric Sciences*, 32(3), 503-511.
- Sigman, D. M., Altabet, M. A., McCorkle, D. C., Francois, R., & Fischer, G. (2000). The $\delta^{15}\text{N}$ of nitrate in the Southern Ocean: nitrogen cycling and circulation in the ocean interior. *Journal of Geophysical Research: Oceans*, 105(C8), 19599-19614.
- Sigman, D. M., K. L. Karsh, & K. L. Casciotti (2009), Nitrogen isotopes in the ocean, in *Encyclopedia of Ocean Sciences*, 2nd ed., edited by J. H. Steele et al., pp. 40–54.
- Singh, A., & Ramesh, R. (2011). Contribution of riverine dissolved inorganic nitrogen flux to new production in the coastal northern Indian Ocean: an assessment. *International Journal of Oceanography*, 2011, 983561.
- Singh, A., Gandhi, N., & Ramesh, R. (2012). Contribution of atmospheric nitrogen deposition to new production in the nitrogen limited photic zone of the northern Indian Ocean. *Journal of Geophysical Research: Oceans*, 117(C6), C06004.
- Sirocko, F., & Lange, H. (1991). Clay-mineral accumulation rates in the Arabian Sea during the late Quaternary, *Marine Geology*, 97, 105-119.

- Sirocko, F., Garbe-Schönberg, D., & Devey, C. (2000). Processes controlling trace element geochemistry of Arabian Sea sediments during the last 25,000 years, *Global and Planetary Change*, 26, 217-303.
- Sirocko, F., Sarnthein, M., Erlenkeuser, H., Lange, H., Arnold, M., & Duplessy, J. (1993). Century-scale events in monsoonal climate over the past 24,000 years, *Nature*, 364, 322-324.
- Sirocko, F., Sarnthein, M., Lange, H., & Erlenkeuser, H. (1991). Atmospheric summer circulation and coastal upwelling in the Arabian Sea during the Holocene and the last glaciation, *Quaternary Research*, 36, 72-93.
- Sirocko, Frank (1989): Sedimentology on core SO42-15KL. PANGAEA, <https://doi.org/10.1594/PANGAEA.77658>, In supplement to: Sirocko, F (1989): Zur Akkumulation von Staubsedimenten im nördlichen Indischen Ozean; Anzeiger der Klimageschichte Arabiens und Indiens. Dissertation, Berichte-Reports, Geologisch-Paläontologisches Institut der Universität Kiel, 27, 185 pp.
- Southon, J., Kashgarian, M., Fontugne, M., Metivier, B., & Yim, W. W. (2002). Marine reservoir corrections for the Indian Ocean and Southeast Asia. *Radiocarbon*, 44(1), 167-180.
- Stuiver, M., & Braziunas, T. F. (1993). Modeling atmospheric ^{14}C influences and ^{14}C ages of marine samples to 10,000 BC. *Radiocarbon*, 35(1), 137-189.
- Stuiver, M., & Reimer, P. J. (1993). Extended ^{14}C data base and revised CALIB 3.0 ^{14}C age calibration program. *Radiocarbon*, 35(1), 215-230.
- Stuiver, M., Reimer, P. J., Bard, E., Beck, J. W., Burr, G. S., Hughen, K. A., Bernd Kromer, Gerry McCormac, Johannes Van Der Plicht, & Spurk, M. (1998). INTCAL98 radiocarbon age calibration, 24,000–0 cal BP. *radiocarbon*, 40(3), 1041-1083.
- Suthhof, A., Ittekkot, V., & Gaye-Haake, B. (2001). Millennial-scale oscillation of denitrification intensity in the Arabian Sea during the Late Quaternary and its potential influence on atmospheric N_2O and global climate. *Global Biogeochemical Cycles*, 15(3), 637-649.
- Taylor, J. A., & Lloyd, J. (1992). Sources and sinks of atmospheric CO_2 . *Australian Journal of Botany*, 40(5), 407-418.
- Thakur, V. C., Joshi, M., Sahoo, D., Suresh, N., Jayangondapermal, R., & Singh, A. (2014). Partitioning of convergence in Northwest Sub-Himalaya: estimation of late Quaternary uplift and convergence rates across the Kangra reentrant, North India. *International Journal of Earth Sciences*, 103(4), 1037-1056.

- Thompson, L. O., Yao, T., Davis, M. E., Henderson, K. A., Mosley-Thompson, E., Lin, P. N., J. Beer, H-A. Synal, J. Cole-Dai & Bolzan, J. F. (1997). Tropical climate instability: The last glacial cycle from a Qinghai-Tibetan ice core. *Science*, 276(5320), 1821-1825.
- Tierney, J. E., & deMenocal, P. B. (2013). Abrupt shifts in Horn of Africa hydroclimate since the Last Glacial Maximum. *Science*, 342(6160), 843-846.
- Tindale, N. W., & Pease, P. P. (1999). Aerosols over the Arabian Sea: Atmospheric transport pathways and concentrations of dust and sea salt. *Deep Sea Research Part II: Topical Studies in Oceanography*, 46(8-9), 1577-1595.
- Tiwari, M., Ramesh, R., Bhushan, R., Sheshshayee, M. S., Somayajulu, B. L., Jull, A., & Burr, G. S. (2010). Did the Indo-Asian summer monsoon decrease during the Holocene following insolation?, *Journal of Quaternary Science*, 25, 1179-1188.
- Trenberth, K. E., Stepaniak, D. P., & Caron, J. M. (2000). The global monsoon as seen through the divergent atmospheric circulation. *Journal of Climate*, 13(22), 3969-3993.
- van Bennekom, A. J., Jansen, J. F., van der Gaast, S. J., van Iperen, J. M., & Pieters, J. (1989). Aluminium-rich opal: an intermediate in the preservation of biogenic silica in the Zaire (Congo) deep-sea fan. *Deep Sea Research Part A. Oceanographic Research Papers*, 36(2), 173-190.
- Vecchi, G. A., & Harrison, D. (2004). Interannual Indian rainfall variability and Indian Ocean sea surface temperature anomalies. In *Earth Climate: The Ocean-Atmosphere Interaction*, C. Wang, S. P. Xie & J.A. Carton (eds.), American Geophysical Union., *Geophysical Monograph*, 147, 247-259.
- von Rad, U., Schulz, H., Riech, V., den Dulk, M., Berner, U., & Sirocko, F. (1999). Multiple monsoon-controlled breakdown of oxygen-minimum conditions during the past 30,000 years documented in laminated sediments off Pakistan. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 152(1-2), 129-161.
- Waelbroeck, C., Labeyrie, L., Michel, E., Duplessy, J. C., Mcmanus, J. F., Lambeck, K., Balbon, E. & Labracherie, M. (2002). Sea-level and deep water temperature changes derived from benthic foraminifera isotopic records. *Quaternary Science Reviews*, 21(1-3), 295-305.
- Webster, P. J., Moore, A. M., Loschnigg, J. P., & Leben, R. R. (1999). Coupled ocean-atmosphere dynamics in the Indian Ocean during 1997-98. *Nature*, 401(6751), 356-360.
- Wuchter, C., Schouten, S., Wakeham, S. G., & Sinninghe Damsté, J. S. (2006). Archaeal tetraether membrane lipid fluxes in the northeastern Pacific and the Arabian Sea: Implications for TEX₈₆ paleothermometry. *Paleoceanography*, 21(4), PA4208.

- Wyrski, K. (1973). Physical oceanography of the Indian Ocean, in: The biology of the Indian Ocean, Springer, 18-36.
- Yadav, R. K. (2017). On the relationship between east equatorial Atlantic SST and ISM through Eurasian wave, *Climate Dynamics*, 48, 281-295.
- Young, D. K., & Kindle, J. C. (1994). Physical processes affecting availability of dissolved silicate for diatom production in the Arabian Sea, *Journal of Geophysical Research: Oceans*, 99, 22619-22632.