

1. Record Nr.	UNINA9911019507903321
Autore	Donelan Mark A
Titolo	Gas Transfer at Water Surfaces
Pubbl/distr/stampa	[Place of publication not identified], : American Geophysical Union, 2001
ISBN	1-118-66863-4
Descrizione fisica	1 online resource (xi, 383 pages)
Collana	Geophysical monograph series ; ; ; 127
Disciplina	530.4/27
Soggetti	Diffusion Mass transfer Gas dynamics Fluid dynamics Transport theory Ocean-atmosphere interaction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Gas transfer at water surfaces : concepts and issues / Mark A. Donelan and Rik Wanninkhof -- Effects of surface waves and turbulence on gas transfer -- Turbulence generated by microscale breaking waves and its influences on air-water gas transfer / Muhammad H.K. Siddiqui [and others] -- On the surface kinematics of microscale breaking wind waves / William L. Peirson and Michael L. Banner -- Effect of microscale wave breaking on air-water gas transfer / C.J. Zappa [and others] -- Statistics of geometric properties of breaking wind waves observed in laboratory / Guillemette Caulliez -- Overview of the CoOP experiments : physical and chemical measurements parameterizing air-sea heat exchange / Erik John Bock [and others] -- Surface wave observations during CoOP experiments and their relation to air-sea gas transfer / Tetsu Hara [and others] -- On the investigations of statistical properties of the micro turbulence at the ocean surface / Uwe Schimpf, Bernd Jahne, and Horst Haussbecker -- On the skewness of the sea slope probability distribution / Bertrand Chapron, D. Vandemark, and T. Elfouhaily -- Directional distributions and mean square slopes of surface waves / Paul A. Hwang and David W. Wang -- Numerical

simulation of hydrodynamic processes beneath a wind-driven water surface / Wu-Ting Tsai -- Direct numerical simulation of turbulent free surface flow with carbon-dioxide gas absorption / Tomoaki Kunugi and Shin-ichi Satake -- LIF measurements of oxygen concentration gradients along flat and wavy air-water interfaces / Philip T. Woodrow Jr. and Steve R. Duke. A direct visualization method of CO gas transfer at water surface driven by wind waves / Kohsei Takehara and Goji T. Etoh -- Measurements of wind-driven current near the water surface by the use of the PTV method / Hajime Kato, Hisamichi Nobuoka, and Naoki Ooshima -- Physics from IR image sequences : quantitative analysis of transport methods and parameters of air-sea gas transfer / Horst W. Hausssecker [and others] -- Measuring the sea surface heat flux and probability distribution of surface renewal events / Christoph S. Garbe, Bernd Jahne, and Horst Hausssecker -- Effects of counter-swell on both the mean current and turbulent structure below the wind-waves / Shinjiro Mizuno -- A closer look at short waves generated by wave interactions with adverse currents / Steven R. Long and Jochen Klinke -- Surface divergence and air-water gas transfer / Sean P. McKenna and Wade R. McGillis -- Effects of buoyancy and surfactants on gas transfer -- The critical importance of buoyancy flux for gas flux across the air-water interface / Sally MacIntyre, Werner Eugster, and George W. Kling -- A model of air-sea gas exchange incorporating the physics of the turbulent boundary layer and the properties of the sea surface / Alexander Soloviev and Peter Schluessel -- Air-lake interaction and surface layer processes / G.N. Panin, A.E. Nasonov, and S.G. Sarkisian -- Spatial variations in surface microlayer surfactants and their role in modulating air-sea exchange / Nelson M. Frew [and others]. Thermal profiling of the sea surface skin layer using FTIR measurements / Jennifer A. Hanafin and Peter J. Minnett -- An autonomous profiler for near surface temperature measurements / Brian Ward and Peter J. Minnett -- Water column CO measurements during the gas ex-98 expedition / R.A. Freely [and others] -- Fine thermohaline structure and gas-exchange in the near-surface layer of the ocean during GasEx-98 / Alexander Soloviev [and others] -- Gas transfer in strong turbulent flows -- A field study of whitecap coverage and its modulations by energy containing surface waves / V.A. Dulov, V.N. Kudryavtsev, and A.N. Bol'shakov -- The physical and practical implications of a CO gas transfer coefficient that varies as the cube of the wind speed / Edward C. Monahan -- Fractional area whitecap coverage and air-sea gas transfer velocities measured during GasEx-98 / William Asher [and others] -- Gas transfer in energetic conditions / David Kevin Woolf -- Estimation of whitecap coverage percentage using shallow grazing-angle video and FMICW radar / Craig L. Stevens, M.J. Smith, and J.A. McGregor -- ASGAMAGE, the air-sea gas exchange/MAGE experiment / Wiebe Oost and ASAMAGE participants -- Comparison of the deliberate tracer method and eddy covariance measurements to determine the air/sea transfer velocity of CO / Cor Jacobs [and others] -- Gas transfer velocities for  $^3\text{He}$  in a lake at high wind speeds / Philippe Jean-Baptiste, Elise Fourre, and Alain Poisson. Measurement uncertainty in gas exchange coefficients / J.S. Gulliver [and others] -- Measurements of free surface turbulence / Joseph J. Orlins and John S. Gulliver -- Gas transfer across a zero-shear surface : a local approach / Mohamed A. Atmane and Jacques George -- Atmosphere-ocean gas exchange due to bubbles generated by wind wave breaking / Roman S. Bortkovskii -- The effect of bubbles on air-water oxygen transfer in the breaker zone / Shohachi Kakuno [and others] -- Bubble size distributions on the North Atlantic and North Sea / Gerrit de Leeuw and Leo H. Cohen -- Measurements of large bubbles

in open-ocean whitecaps / Dale Stokes [and others] -- The effects of bubbles on mass transfer across the breaking air-water interface / Satoru Komori and Ryuta Misumi -- LUMINY : an overview / G. de Leeuw [and others] -- Bubbles outside the plume during the LUMINY wind-wave experiment / Gerrit de Leeuw and Ira Leifer -- Bubble measurements in breaking-wave generated bubble plumes during the LUMINY wind-wave experiment / Ira Leifer and Gerrit de Leeuw -- An experimental study of bubble mediated gas exchange for a single bubble / Nobuhito Mori, Masahiro Imamura, and Ryosuke Yamamoto -- Better bubble process modeling : improved bubble hydrodynamics parameterization / Ranjan Patro, Ira Leifer, and Peter Bowyer. Development and testing of an eddy accumulator / W. John Cooper, Mehran Alaee, and Mark Donelan -- Remote sensing for large-scale gas transfer -- A multi-year time series of global gas transfer velocity from the TOPEX dual frequency, normalized radar backscatter algorithm / David M. Glover [and others] -- A global, high resolution, satellite-based model of air-sea isoprene flux / David J. Erickson III and Jose L. Hernandez -- Daily surface wind fields produced by merged satellite data / Abderrahim Bentamy [and others] -- The effect of using time-averaged winds on regional air-sea CO fluxes / Rik Wanninkhof [and others] -- Gas transfer by aeration -- A dynamic method to estimate the reoxygenation rate at hydraulic structures / Badre E. Boumansour [and others] -- Mass transfer in bubbly flows : influence of physico-chemical and hydrodynamic conditions / Cornelia Lang -- Air-water gas transfer in uniform flows with large gravel-bed roughness / Douglas B. Moog and Gerhard H. Jirka -- Large scale laboratory experiments for water oxygenation under breaking waves / V.K. Tsoukala, E.I. Daniil, and C.I. Moutzouris.

---