# Wolfgang Ludwig

List of Publications by Year
in descending order

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| 87 | 6,794 | 61984 | 62596 |
|---|---|---|---|
| papers | citations | 43 h-index | 80 g-index |

| 89 | 89 | 89 | 7973 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Ingested Microplastics in 18 Local Fish Species from the Northwestern Mediterranean Sea. Microplastics, 2022, 1, 186-197. | 4.2 | 8 |
| 2 | Interrelations Between Soil Erosion Conditioning Factors in Basins of Ecuador: Contributions to the Spatial Model Construction. , 2021, , 892-903. | | 5 |
| 3 | The Mediterranean Region as a Paradigm of the Global Decoupling of N and P Between Soils and Freshwaters. Global Biogeochemical Cycles, 2021, 35, e2020GB006874. | 4.9 | 9 |
| 4 | The missing ocean plastic sink: Gone with the rivers. Science, 2021, 373, 107-111. | 12.6 | 146 |
| 5 | Microplastic fluxes in a large and a small Mediterranean river catchments: The TÃªt and the RhÃ´ne, Northwestern Mediterranean Sea. Science of the Total Environment, 2020, 716, 136984. | 8.0 | 80 |
| 6 | Unravelling Climate and Anthropogenic Forcings on the Evolution of Surface Water Resources in Southern France. Water (Switzerland), 2020, 12, 3581. | 2.7 | 6 |
| 7 | TomoBank: a tomographic data repository for computational x-ray science. Measurement Science and Technology, 2018, 29, 034004. | 2.6 | 55 |
| 8 | Predicting the 3D fatigue crack growth rate of small cracks using multimodal data via Bayesian networks: In-situ experiments and crystal plasticity simulations. Journal of the Mechanics and Physics of Solids, 2018, 115, 208-229. | 4.8 | 80 |
| 9 | The impact of reservoir construction on riverine sediment and carbon fluxes to the Mediterranean Sea. Progress in Oceanography, 2018, 163, 94-111. | 3.2 | 22 |
| 10 | Incipient Bulk Polycrystal Plasticity Observed by Synchrotron In-Situ Topotomography. Materials, 2018, 11, 2018. | 2.9 | 18 |
| 11 | Anthropogenic Reservoirs of Various Sizes Trap Most of the Sediment in the Mediterranean Maghreb Basin. Water (Switzerland), 2018, 10, 927. | 2.7 | 10 |
| 12 | Three-dimensional grain growth in pure iron. Part I. statistics on the grain level. Acta Materialia, 2018, 156, 76-85. | 7.9 | 48 |
| 13 | Simulation of Short Fatigue Crack Propagation in a 3D Experimental Microstructure. Advanced Engineering Materials, 2017, 19, 1600721. | 3.5 | 25 |
| 14 | Assessing reliability of fatigue indicator parameters for small crack growth via a probabilistic framework. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 045010. | 2.0 | 40 |
| 15 | Multicontamination phenomena occur more often than expected in Mediterranean coastal watercourses: Study case of the TÃªt River (France). Science of the Total Environment, 2017, 579, 10-21. | 8.0 | 17 |
| 16 | An Orientation-space Super Sampling Technique for Six-dimensional Diffraction Contrast Tomography. Fundamenta Informaticae, 2016, 146, 219-230. | 0.4 | 1 |
| 17 | Comparison of voiding mechanisms in semi-crystalline polyamide 6 during tensile and creep tests. Polymer Testing, 2016, 49, 137-146. | 4.8 | 17 |
| 18 | Three dimensional quantification of anisotropic void evolution in deformed semi-crystalline polyamide 6. International Journal of Plasticity, 2016, 83, 19-36. | 8.8 | 34 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Controls, budgets and variability of riverine sediment fluxes to the Gulf of Lions (NW Mediterranean) Tj ETQq1 1 0.784314 rgBT /Over | 5.4 | 41 |
| 20 | Combining operando synchrotron X-ray tomographic microscopy and scanning X-ray diffraction to study lithium ion batteries. Scientific Reports, 2016, 6, 27994. | 3.3 | 53 |
| 21 | Three-dimensional full-field X-ray orientation microscopy. Scientific Reports, 2016, 6, 20618. | 3.3 | 33 |
| 22 | A feasibility study of full-field X-ray orientation microscopy at the onset of deformation twinning. Journal of Applied Crystallography, 2016, 49, 544-555. | 4.5 | 11 |
| 23 | Coupling Diffraction Contrast Tomography with the Finite Element Method. Advanced Engineering Materials, 2016, 18, 903-912. | 3.5 | 24 |
| 24 | Comparison between diffraction contrast tomography and high-energy diffraction microscopy on a slightly deformed aluminium alloy. IUCrJ, 2016, 3, 32-42. | 2.2 | 34 |
| 25 | A study of deformation twinning in a titanium alloy by X-ray diffraction contrast tomography. Acta Materialia, 2016, 105, 417-428. | 7.9 | 56 |
| 26 | Tracing tetraether lipids from source to sink in the RhÃƒÂ´ne River system (NW Mediterranean). Frontiers in Earth Science, 2015, 3, . | 1.8 | 5 |
| 27 | An accurate projection model for diffraction image formation and inversion using a polychromatic cone beam. Journal of Applied Crystallography, 2015, 48, 334-343. | 4.5 | 8 |
| 28 | HyMeX: A 10-Year Multidisciplinary Program on the Mediterranean Water Cycle. Bulletin of the American Meteorological Society, 2014, 95, 1063-1082. | 3.3 | 288 |
| 29 | Nanovoid morphology and distribution in deformed HDPE studied by magnified synchrotron radiation holotomography. Polymer, 2014, 55, 6439-6443. | 3.8 | 36 |
| 30 | Hydrological and climatic uncertainties associated with modeling the impact of climate change on water resources of small Mediterranean coastal rivers. Journal of Hydrology, 2014, 511, 403-422. | 5.4 | 86 |
| 31 | Comparison between a near-field and a far-field indexing approach for characterization of a polycrystalline sample volume containing more than 1500 grains. Journal of Applied Crystallography, 2014, 47, 1402-1416. | 4.5 | 17 |
| 32 | Reconstruction of local orientation in grains using a discrete representation of orientation space. Journal of Applied Crystallography, 2014, 47, 1826-1840. | 4.5 | 29 |
| 33 | Advances in X-ray diffraction contrast tomography: flexibility in the setup geometry and application to multiphase materials. Journal of Applied Crystallography, 2013, 46, 297-311. | 4.5 | 108 |
| 34 | Box-Scan: A Novel 3DXRD Method for Studies of Recrystallization and Grain Growth. Materials Science Forum, 2012, 715-716, 518-520. | 0.3 | 5 |
| 35 | In-line x-ray phase-contrast tomography and diffraction-contrast tomography study of the ferrite-cementite microstructure in steel. , 2012, , . | | 1 |
| 36 | Circulation of the Mediterranean Sea and its Variability. , 2012, , 187-256. | | 54 |

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|---|---|---|---|
| 37 | Assessing the nonconservative fluvial fluxes of dissolved organic carbon in North America. Journal of Geophysical Research, 2012, 117, . | 3.3 | 57 |
| 38 | Impact of oceanic floods on particulate metal inputs to coastal and deep-sea environments: A case study in the NW Mediterranean Sea. Continental Shelf Research, 2012, 45, 15-26. | 1.8 | 20 |
| 39 | Three-dimensional morphology of cementite in steel studied by X-ray phase-contrast tomography. Scripta Materialia, 2012, 67, 261-264. | 5.2 | 8 |
| 40 | Fate of metals in coastal sediments of a Mediterranean flood-dominated system: An approach based on total and labile fractions. Estuarine, Coastal and Shelf Science, 2011, 92, 486-495. | 2.1 | 51 |
| 41 | Climate change evolution of the hydrological balance of the Mediterranean, Black and Caspian Seas: impact of climate model resolution. Climate Dynamics, 2011, 36, 205-228. | 3.8 | 39 |
| 42 | 3-D growth of a short fatigue crack within a polycrystalline microstructure studied using combined diffraction and phase-contrast X-ray tomography. Acta Materialia, 2011, 59, 590-601. | 7.9 | 166 |
| 43 | Analysis of Snow Microstructure by Means of Xâ€Ray Diffraction Contrast Tomography. Advanced Engineering Materials, 2011, 13, 128-135. | 3.5 | 30 |
| 44 | 3D Xâ€ray Microtomography Volume Correlation to Study Fatigue Crack Growth. Advanced Engineering Materials, 2011, 13, 186-193. | 3.5 | 15 |
| 45 | Three dimensional experimental and numerical multiscale analysis of a fatigue crack. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1307-1325. | 6.6 | 132 |
| 46 | Impact of recent climate change on the hydrology of coastal Mediterranean rivers in Southern France. Climatic Change, 2010, 99, 425-456. | 3.6 | 63 |
| 47 | Influence of closure on the 3D propagation of fatigue cracks in a nodular cast iron investigated by X-ray tomography and 3D volume correlation. Acta Materialia, 2010, 58, 2957-2967. | 7.9 | 70 |
| 48 | Status and evolution of the ESRF beamline ID19. AIP Conference Proceedings, 2010, , . | 0.4 | 94 |
| 49 | River discharges of water and nutrients to the Mediterranean and Black Sea: Major drivers for ecosystem changes during past and future decades?. Progress in Oceanography, 2009, 80, 199-217. | 3.2 | 595 |
| 50 | Sediment discharge of the rivers of Catalonia, NE Spain, and the influence of human impacts. Journal of Hydrology, 2009, 366, 76-88. | 5.4 | 96 |
| 51 | X-Ray Micro-Tomography Coupled to the Extended Finite Element Method to Investigate Microstructurally Short Fatigue Cracks. Materials Science Forum, 2008, 567-568, 301-304. | 0.3 | 3 |
| 52 | Advances in synchrotron hard X-ray based imaging. Comptes Rendus Physique, 2008, 9, 624-641. | 0.9 | 60 |
| 53 | X-ray diffraction contrast tomography: a novel technique for three-dimensional grain mapping of polycrystals. I. Direct beam case. Journal of Applied Crystallography, 2008, 41, 302-309. | 4.5 | 221 |
| 54 | X-ray diffraction contrast tomography: a novel technique for three-dimensional grain mapping of polycrystals. II. The combined case. Journal of Applied Crystallography, 2008, 41, 310-318. | 4.5 | 159 |

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|---|---|---|---|
| 55 | Input of particulate heavy metals from rivers and associated sedimentary deposits on the Gulf of Lion continental shelf. Estuarine, Coastal and Shelf Science, 2008, 77, 285-295. | 2.1 | 93 |
| 56 | Impact of flood events on the transport of terrestrial organic matter to the ocean: A study of the TÃªt River (SW France) using the BIT index. Organic Geochemistry, 2007, 38, 1593-1606. | 1.8 | 66 |
| 57 | Predicting the impact of land use on the major element and nutrient fluxes in coastal Mediterranean rivers: The case of the TÃªt River (Southern France). Applied Geochemistry, 2007, 22, 230-248. | 3.0 | 33 |
| 58 | Potential impact of changes in river nutrient supply on global ocean biogeochemistry. Global Biogeochemical Cycles, 2007, 21, . | 4.9 | 64 |
| 59 | Fast X-ray tomography and acoustic emission study of damage in metals during continuous tensile tests. Acta Materialia, 2007, 55, 6806-6815. | 7.9 | 75 |
| 60 | High-resolution three-dimensional mapping of individual grains in polycrystals by topotomography. Journal of Applied Crystallography, 2007, 40, 905-911. | 4.5 | 42 |
| 61 | Origin and distribution of terrestrial organic matter in the NW Mediterranean (Gulf of Lions): Exploring the newly developed BIT index. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a. | 2.5 | 101 |
| 62 | Sources and sinks of sediment-bound contaminants in the Gulf of Lions (NW Mediterranean Sea): A multi-tracer approach. Continental Shelf Research, 2006, 26, 1843-1857. | 1.8 | 106 |
| 63 | Fatigue crack propagation: In situ visualization using X-ray microtomography and 3D simulation using the extended finite element method. Acta Materialia, 2006, 54, 1111-1122. | 7.9 | 124 |
| 64 | Advances in synchrotron radiation microtomography. Scripta Materialia, 2006, 55, 41-46. | 5.2 | 166 |
| 65 | Characterisation and Modelling of the Three Dimensional Propagation of Short Fatigue Cracks. Materials Science Forum, 2006, 519-521, 997-1004. | 0.3 | 2 |
| 66 | Non Destructive Three Dimensional Imaging of Aluminium Alloys. Materials Science Forum, 2006, 519-521, 1367-1372. | 0.3 | 1 |
| 67 | Early muddy deposits along the Gulf of Lions shoreline: A key for a better understanding of land-to-sea transfer of sediments and associated pollutant fluxes. Marine Geology, 2005, 222-223, 345-358. | 2.1 | 45 |
| 68 | Background levels of heavy metals in surficial sediments of the Gulf of Lions (NW Mediterranean): An approach based on 133Cs normalization and lead isotope measurements. Environmental Pollution, 2005, 138, 167-177. | 7.5 | 110 |
| 69 | Evaluating the impact of the recent temperature increase on the hydrology of the TÃªt River (Southern) Tj ETQq1 1 0.784314 rgBT /O | 5.4 | 64 |
| 70 | Nutrients and carbon budgets for the Gulf of Lion during the Moogli cruises. Oceanologica Acta: European Journal of Oceanology - Revue Europeene De Oceanologie, 2003, 26, 421-433. | 0.7 | 60 |
| 71 | Worldwide distribution of continental rock lithology: Implications for the atmospheric/soil CO2uptake by continental weathering and alkalinity river transport to the oceans. Global Biogeochemical Cycles, 2003, 17, n/a-n/a. | 4.9 | 397 |
| 72 | Quantitative phase contrast tomography using coherent synchrotron radiation. , 2002, 4503, 82. | | 42 |

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|---|---|---|---|
| 73 | Riverine-driven interhemispheric transport of carbon. Global Biogeochemical Cycles, 2001, 15, 393-405. | 4.9 | 90 |
| 74 | <title>Submicron focusing of hard x rays with reflecting surfaces at the ESRF</title>. , 2001, 4499, 105. | | 49 |
| 75 | The age of river carbon. Nature, 2001, 409, 466-467. | 27.8 | 21 |
| 76 | Three-dimensional snow images by X-ray microtomography. Annals of Glaciology, 2001, 32, 75-81. | 1.4 | 107 |
| 77 | Direct Observation of Grain Boundary Wetting by Synchrotron Radiation Imaging Techniques. Defect and Diffusion Forum, 2001, 194-199, 1319-1330. | 0.4 | 5 |
| 78 | Phase imaging using highly coherent X-rays: radiography, tomography, diffraction topography. Journal of Synchrotron Radiation, 2000, 7, 196-201. | 2.4 | 58 |
| 79 | Soil erosion and atmospheric CO2 during the last glacial maximum: the rÃ1e of riverine organic matter fluxes. Tellus, Series B: Chemical and Physical Meteorology, 1999, 51, 156-164. | 1.6 | 3 |
| 80 | <title>X-ray camera for computed microtomography of biological samples with micrometer resolution using Lu<formula><inf><roman>3</roman></inf></formula>Al<formula><inf><roman>5</roman></inf></formula>O<formula><inf><roman> and Y<formula><inf><roman>3</roman></inf></formula>Al<formula><inf><roman>5</roman></inf></formula>O<formula><inf><roman> scintillators</title>. , 1999, 3659, 170. | | 58 |
| 81 | Hard x-ray phase imaging using simple propagation of a coherent synchrotron radiation beam. Journal Physics D: Applied Physics, 1999, 32, A145-A151. | 2.8 | 138 |
| 82 | Enhanced chemical weathering of rocks during the last glacial maximum: a sink for atmospheric CO2?. Chemical Geology, 1999, 159, 147-161. | 3.3 | 66 |
| 83 | <title>Local reconstruction in 3D synchrotron radiation microtomography</title>. , 1999, , . | | 0 |
| 84 | <title>Quantitative phase tomography by holographic reconstruction</title>. , 1999, 3772, 279. | | 9 |
| 85 | Atmospheric CO2 consumption by continental erosion: present-day controls and implications for the last glacial maximum. Global and Planetary Change, 1998, 16-17, 107-120. | 3.5 | 119 |
| 86 | Predicting the oceanic input of organic carbon by continental erosion. Global Biogeochemical Cycles, 1996, 10, 23-41. | 4.9 | 763 |
| 87 | Grain Tracking at the High Energy Materials Science Beamline of the Petra III Synchrotron Radiation Source. Materials Science Forum, 0, 652, 70-73. | 0.3 | 2 |