

Karl Fabian

List of Publications by Year in descending order

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107
papers

3,523
citations

126907

33
h-index

155660

55
g-index

120
all docs

120
docs citations

120
times ranked

3433
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | A 62‰kyr geomagnetic palaeointensity record from the Taymyr Peninsula, Russian Arctic. <i>Geochronology</i> , 2022, 4, 87-107. | 2.5 | 2 |
| 2 | Hysteresis parameters and magnetic anisotropy of silicate-hosted magnetite exsolutions. <i>Geophysical Journal International</i> , 2022, 229, 1695-1717. | 2.4 | 6 |
| 3 | A First-Order Statistical Exploration of the Mathematical Limits of Micromagnetic Tomography. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, . | 2.5 | 3 |
| 4 | Quantifying diffuse contamination: Comparing silver and mercury in organogenic and minerogenic soil. <i>Science of the Total Environment</i> , 2022, 832, 155065. | 8.0 | 8 |
| 5 | Mapping Magnetic Signals of Individual Magnetite Grains to Their Internal Magnetic Configurations Using Micromagnetic Models. <i>Journal of Geophysical Research: Solid Earth</i> , 2022, 127, . | 3.4 | 3 |
| 6 | Excess Cr and Ni in top soil: Comparing the effect of geology, diffuse contamination, and biogenic influence. <i>Science of the Total Environment</i> , 2022, 843, 157059. | 8.0 | 6 |
| 7 | Lamellar magnetism and exchange bias in billion-year-old metamorphic titanohematite with nanoscale ilmenite exsolution lamellae – III. Atomic-magnetic basis for experimental results. <i>Geophysical Journal International</i> , 2021, 226, 1348-1367. | 2.4 | 2 |
| 8 | Single Particle Multipole Expansions From Micromagnetic Tomography. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009663. | 2.5 | 7 |
| 9 | Mineral Magnetic Characterization of High-Latitude Sediments From Lake Levinson-Lessing, Siberia. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093026. | 4.0 | 6 |
| 10 | Micromagnetic Tomography for Paleomagnetism and Rock-Magnetism. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022364. | 3.4 | 5 |
| 11 | Dipole and Nondipole Evolution of the Historical Geomagnetic Field From Instrumental, Archeomagnetic, and Volcanic Data. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022565. | 3.4 | 11 |
| 12 | Demagnetization Energy and Internal Stress in Magnetite From Temperature-Dependent Hysteresis Measurements. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL096147. | 4.0 | 6 |
| 13 | Hysteresis of Natural Magnetite Ensembles: Micromagnetics of Silicate-Hosted Magnetite Inclusions Based on Focused-Beam Nanotomography. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009389. | 2.5 | 19 |
| 14 | The magnetization of the ocean floor: stress and fracturing of titanomagnetite particles by low-temperature oxidation. <i>Geophysical Journal International</i> , 2020, 221, 2104-2112. | 2.4 | 7 |
| 15 | Separating Geometry-From Stress-Induced Remanent Magnetization in Magnetite With Ilmenite Lamellae From the Stardalur Basalts, Iceland. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008761. | 2.5 | 8 |
| 16 | Mean-field modelling of magnetic nanoparticles: The effect of particle size and shape on the Curie temperature. <i>Physical Review B</i> , 2019, 99, . | 3.2 | 6 |
| 17 | A uniqueness theorem for tomography-assisted potential-field inversion. <i>Geophysical Journal International</i> , 2019, 216, 760-766. | 2.4 | 9 |
| 18 | A Bayesian iterative geomagnetic model with universal data input: Self-consistent spherical harmonic evolution for the geomagnetic field over the last 4000‰years. <i>Physics of the Earth and Planetary Interiors</i> , 2019, 290, 57-75. | 1.9 | 33 |

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|----|---|------|-----------|
| 19 | The large-scale distribution of Cu and Zn in sub- and topsoil: Separating topsoil bioaccumulation and natural matrix effects from diffuse and regional contamination. <i>Science of the Total Environment</i> , 2019, 655, 730-740. | 8.0 | 12 |
| 20 | Cadmium enrichment in topsoil: Separating diffuse contamination from biosphere-circulation signals. <i>Science of the Total Environment</i> , 2019, 651, 1344-1355. | 8.0 | 22 |
| 21 | MERRILL: Micromagnetic Earth Related Robust Interpreted Language Laboratory. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 1080-1106. | 2.5 | 47 |
| 22 | The oldest magnetic record in our solar system identified using nanometric imaging and numerical modeling. <i>Nature Communications</i> , 2018, 9, 1173. | 12.8 | 23 |
| 23 | GEMAS: CNS concentrations and C/N ratios in European agricultural soil. <i>Science of the Total Environment</i> , 2018, 627, 975-984. | 8.0 | 22 |
| 24 | The magnetic structure and palaeomagnetic recording fidelity of sub-micron greigite (Fe ₃ S ₄). <i>Earth and Planetary Science Letters</i> , 2018, 483, 76-89. | 4.4 | 15 |
| 25 | Impact of an iron mine and a nickel smelter at the Norwegian/Russian border close to the Barents Sea on surface soil magnetic susceptibility and content of potentially toxic elements. <i>Chemosphere</i> , 2018, 195, 48-62. | 8.2 | 30 |
| 26 | Determining Individual Particle Magnetizations in Assemblages of Micrograins. <i>Geophysical Research Letters</i> , 2018, 45, 2995-3000. | 4.0 | 17 |
| 27 | GEMAS: Establishing geochemical background and threshold for 53 chemical elements in European agricultural soil. <i>Applied Geochemistry</i> , 2018, 88, 302-318. | 3.0 | 143 |
| 28 | Graphical statistics to explore the natural and anthropogenic processes influencing the inorganic quality of drinking water, ground water and surface water. <i>Applied Geochemistry</i> , 2018, 88, 133-148. | 3.0 | 23 |
| 29 | Energy barriers in three-dimensional micromagnetic models and the physics of thermoviscous magnetization. <i>Geophysical Journal International</i> , 2018, 215, 314-324. | 2.4 | 19 |
| 30 | Spherical magnetic field gradients and lithospheric magnetization (Part 1) : finite difference calculation and depth sensitivity to lithospheric magnetization. <i>Geophysical Journal International</i> , 2018, 215, 1747-1765. | 2.4 | 2 |
| 31 | Geosphere-biosphere circulation of chemical elements in soil and plant systems from a 100 km transect from southern central Norway. <i>Science of the Total Environment</i> , 2018, 639, 129-145. | 8.0 | 20 |
| 32 | Element distribution in <i>Lactarius rufus</i> in comparison to the underlying substrate along a transect in southern Norway. <i>Applied Geochemistry</i> , 2018, 97, 61-70. | 3.0 | 12 |
| 33 | Quantifying Diffuse Contamination: Method and Application to Pb in Soil. <i>Environmental Science & Technology</i> , 2017, 51, 6719-6726. | 10.0 | 22 |
| 34 | Geochemical characterisation of northern Norwegian fjord surface sediments: A baseline for further paleo-environmental investigations. <i>Continental Shelf Research</i> , 2017, 148, 104-115. | 1.8 | 7 |
| 35 | Stability of equidimensional pseudo-single-domain magnetite over billion-year timescales. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 10356-10360. | 7.1 | 58 |
| 36 | The HISTMAG database: combining historical, archaeomagnetic and volcanic data. <i>Geophysical Journal International</i> , 2017, 210, 1347-1359. | 2.4 | 33 |

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|----|---|-----|-----------|
| 37 | Nonlinear Preisach maps: Detecting and characterizing separate remanent magnetic fractions in complex natural samples. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 8373-8395. | 3.4 | 16 |
| 38 | Lamellar magnetism and exchange bias in billion-year-old titanohematite with nanoscale ilmenite exsolution lamellae: I. Mineral and magnetic characterization. <i>Geophysical Journal International</i> , 2016, 206, 470-486. | 2.4 | 11 |
| 39 | Multi-scale three-dimensional characterization of iron particles in dusty olivine: Implications for paleomagnetism of chondritic meteorites. <i>American Mineralogist</i> , 2016, 101, 2070-2084. | 1.9 | 35 |
| 40 | Automated paleomagnetic and rock magnetic data acquisition with an in-line horizontal $\alpha\text{-}2\text{G}$ -system. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 3546-3559. | 2.5 | 51 |
| 41 | Forward modeling magnetic fields of induced and remanent magnetization in the lithosphere using tesseroïds. <i>Computers and Geosciences</i> , 2016, 96, 124-135. | 4.2 | 23 |
| 42 | Pb concentrations and isotope ratios of soil O and C horizons in Nord-Trøndelag, central Norway: Anthropogenic or natural sources?. <i>Applied Geochemistry</i> , 2016, 74, 56-66. | 3.0 | 16 |
| 43 | Physical interpretation of isothermal remanent magnetization endmembers: New insights into the environmental history of Lake Hovsgul, Mongolia. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 4669-4683. | 2.5 | 6 |
| 44 | Does size matter? Statistical limits of paleomagnetic field reconstruction from small rock specimens. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 15-26. | 3.4 | 33 |
| 45 | Remanent magnetization, magnetic coupling, and interface ionic configurations of intergrown rhombohedral and cubic Fe-Ti oxides: A short survey. <i>American Mineralogist</i> , 2016, 101, 518-530. | 1.9 | 19 |
| 46 | Norwegian fjord sediments reveal NAO related winter temperature and precipitation changes of the past 2800 years. <i>Earth and Planetary Science Letters</i> , 2016, 435, 84-93. | 4.4 | 48 |
| 47 | Focused Ion Beam Nanotomography of Chondritic Meteorites: Closing the Mesoscale Length Gap in Paleomagnetic Studies. <i>Microscopy and Microanalysis</i> , 2015, 21, 2261-2262. | 0.4 | 0 |
| 48 | A strong enrichment of potentially toxic elements (PTEs) in Nord-Trøndelag (central Norway) forest soil. <i>Science of the Total Environment</i> , 2015, 536, 130-141. | 8.0 | 33 |
| 49 | A regional-scale geochemical survey of soil O and C horizon samples in Nord-Trøndelag, Central Norway: Geology and mineral potential. <i>Applied Geochemistry</i> , 2015, 61, 192-205. | 3.0 | 19 |
| 50 | Magnetic mean-field modelling of solid solutions: theoretical foundations and application to the hematite-ilmenite system. <i>Geophysical Journal International</i> , 2015, 202, 1029-1040. | 2.4 | 7 |
| 51 | Biogeochemical plant-soil interaction: Variable element composition in leaves of four plant species collected along a south-north transect at the southern tip of Norway. <i>Science of the Total Environment</i> , 2015, 506-507, 480-495. | 8.0 | 40 |
| 52 | Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions IV: the fine structure of self-reversed thermoremanent magnetization. <i>Geophysical Journal International</i> , 2014, 196, 1375-1396. | 2.4 | 7 |
| 53 | A new 6 Myr stratigraphic framework for the Atlantic-Arctic Gateway. <i>Quaternary Science Reviews</i> , 2014, 92, 170-178. | 3.0 | 63 |
| 54 | Dating and palaeoenvironmental reconstruction of the sediments around the Miocene/Pliocene boundary in Yermak Plateau ODP Hole 911A using marine palynology. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2014, 414, 382-402. | 2.3 | 8 |

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|----|--|------|-----------|
| 55 | Ferroan geikielite and coupled spinel-rutile exsolution from titanohematite: Interface characterization and magnetic properties. <i>American Mineralogist</i> , 2014, 99, 1694-1712. | 1.9 | 3 |
| 56 | GEMAS: Spatial distribution of the pH of European agricultural and grazing land soil. <i>Applied Geochemistry</i> , 2014, 48, 207-216. | 3.0 | 71 |
| 57 | Magnetic force microscopy reveals meta-stable magnetic domain states that prevent reliable absolute palaeointensity experiments. <i>Nature Communications</i> , 2014, 5, 4548. | 12.8 | 19 |
| 58 | Effect of early Pliocene uplift on late Pliocene cooling in the Arcticâ€‘Atlantic gateway. <i>Earth and Planetary Science Letters</i> , 2014, 387, 132-144. | 4.4 | 71 |
| 59 | Measuring the Curie temperature. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 947-961. | 2.5 | 106 |
| 60 | Influence of lattice-preferred orientation with respect to magnetizing field on intensity of remanent magnetization in polycrystalline hemo-ilmenite. <i>Geophysical Journal International</i> , 2013, 192, 514-536. | 2.4 | 15 |
| 61 | Northern Hemisphere Glaciation during the Globally Warm Early Late Pliocene. <i>PLoS ONE</i> , 2013, 8, e81508. | 2.5 | 91 |
| 62 | Comment on â€‘Detecting uniaxial single domain grains with a modified IRM techniqueâ€™ by R. Mitra, L. Tauxe and J. S. Gee. <i>Geophysical Journal International</i> , 2012, 191, 42-45. | 2.4 | 3 |
| 63 | Variations of magnetic properties in thin lava flow profiles: Implications for the recording of the Laschamp Excursion. <i>Physics of the Earth and Planetary Interiors</i> , 2012, 200-201, 10-27. | 1.9 | 2 |
| 64 | The geodynamo as a random walker: A view on reversal statistics. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 8 |
| 65 | Lead and lead isotopes in agricultural soils of Europe â€‘ The continental perspective. <i>Applied Geochemistry</i> , 2012, 27, 532-542. | 3.0 | 129 |
| 66 | Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions: implications for magnetic self-reversal and exchange bias-II. <i>Chemical changes during quench and annealing. Geophysical Journal International</i> , 2012, 188, 447-472. | 2.4 | 11 |
| 67 | The concept of compositional data analysis in practice â€‘ Total major element concentrations in agricultural and grazing land soils of Europe. <i>Science of the Total Environment</i> , 2012, 426, 196-210. | 8.0 | 211 |
| 68 | Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions: implications for magnetic self-reversal and exchange bias-I. Fe-Ti order transition in quenched synthetic ilmenite 61. <i>Geophysical Journal International</i> , 2011, 186, 997-1014. | 2.4 | 16 |
| 69 | Magnetic properties of terrestrial moss (<i>Hylocomium splendens</i>) along a northâ€‘south profile crossing the city of Oslo, Norway. <i>Science of the Total Environment</i> , 2011, 409, 2252-2260. | 8.0 | 32 |
| 70 | Experimental Study of the Magnetic Signature of Basal-Plane Anisotropy in Hematite. , 2011, , 311-320. | | 8 |
| 71 | Geometry of ionic arrangements and magnetic interactions in ordered ferri-ilmenite solid solutions and its effect on lowâ€‘ magnetic behavior. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, . | 2.5 | 10 |
| 72 | Multiple-specimen absolute paleointensity determination: An optimal protocol including pTRM normalization, domain-state correction, and alteration test. <i>Earth and Planetary Science Letters</i> , 2010, 297, 84-94. | 4.4 | 79 |

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|----|---|------|-----------|
| 73 | Mechanism of exchange bias for isolated nanoparticles embedded in an antiferromagnetic matrix. <i>Physical Review B</i> , 2009, 80, . | 3.2 | 9 |
| 74 | Geomagnetic field evolution during the Laschamp excursion. <i>Earth and Planetary Science Letters</i> , 2009, 278, 87-95. | 4.4 | 47 |
| 75 | Correcting relative paleointensity records for variations in sediment composition: Results from a South Atlantic stratigraphic network. <i>Earth and Planetary Science Letters</i> , 2009, 284, 34-43. | 4.4 | 18 |
| 76 | High efficiency of natural lamellar remanent magnetisation in single grains of ilmene-hematite calculated using Mössbauer spectroscopy. <i>Earth and Planetary Science Letters</i> , 2009, 288, 268-278. | 4.4 | 20 |
| 77 | Records of Paleomagnetic Field Variations. <i>Advances in Geophysical and Environmental Mechanics and Mathematics</i> , 2009, , 65-106. | 0.2 | 7 |
| 78 | Thermochemical remanence acquisition in single-domain particle ensembles: A case for possible overestimation of the geomagnetic paleointensity. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, . | 2.5 | 43 |
| 79 | Crustal Magnetism, Lamellar Magnetism and Rocks That Remember. <i>Elements</i> , 2009, 5, 241-246. | 0.5 | 45 |
| 80 | Twinning control of magnetic properties of multidomain magnetite below the Verwey transition revealed by measurements on individual particles. <i>Geophysical Journal International</i> , 2008, 174, 93-106. | 2.4 | 19 |
| 81 | On the possibility of recovering palaeo-diurnal magnetic variations in transitional lava flows. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 169, 117-130. | 1.9 | 1 |
| 82 | On the possibility of recovering paleo-diurnal magnetic variations in transitional lava flows. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 169, 108-116. | 1.9 | 1 |
| 83 | Exchange bias identifies lamellar magnetism as the origin of the natural remanent magnetization in titanohematite with ilmenite exsolution from Modum, Norway. <i>Earth and Planetary Science Letters</i> , 2008, 268, 339-353. | 4.4 | 35 |
| 84 | A low-temperature phase diagram for ilmenite-rich compositions in the system Fe ₂ O ₃ -FeTiO ₃ . <i>American Mineralogist</i> , 2008, 93, 1260-1272. | 1.9 | 37 |
| 85 | Paleomagnetic reconstruction of the global geomagnetic field evolution during the Matuyama/Brunhes transition: Iterative Bayesian inversion and independent verification. <i>Earth and Planetary Science Letters</i> , 2007, 253, 172-195. | 4.4 | 109 |
| 86 | Rock magnetic properties and relative paleointensity stack for the last 300 Åka based on a stratigraphic network from the subtropical and subantarctic South Atlantic. <i>Earth and Planetary Science Letters</i> , 2007, 260, 297-312. | 4.4 | 14 |
| 87 | Magnetic exchange bias of more than 1 Tesla in a natural mineral intergrowth. <i>Nature Nanotechnology</i> , 2007, 2, 631-634. | 31.5 | 74 |
| 88 | Approach to saturation analysis of hysteresis measurements in rock magnetism and evidence for stress dominated magnetic anisotropy in young mid-ocean ridge basalt. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 154, 299-307. | 1.9 | 54 |
| 89 | The role of magnetostatic interactions in sediment suspensions. <i>Geophysical Journal International</i> , 2006, 165, 775-785. | 2.4 | 14 |
| 90 | A linear theory of physical properties in inhomogeneous sediments and its application to relative paleointensity determination. <i>Earth Discussions</i> , 2006, 1, 51-62. | 0.3 | 2 |

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|-----|--|-----|-----------|
| 91 | On the determination of magnetic grain-size distributions of superparamagnetic particle ensembles using the frequency dependence of susceptibility at different temperatures. <i>Geophysical Journal International</i> , 2005, 162, 736-746. | 2.4 | 50 |
| 92 | Three-dimensional micromagnetic calculations for naturally shaped magnetite: Octahedra and magnetosomes. <i>Earth and Planetary Science Letters</i> , 2005, 233, 311-324. | 4.4 | 46 |
| 93 | A stratigraphic network across the Subtropical Front in the central South Atlantic: Multi-parameter correlation of magnetic susceptibility, density, X-ray fluorescence and $\delta^{18}O$ records. <i>Earth and Planetary Science Letters</i> , 2005, 240, 694-709. | 4.4 | 28 |
| 94 | Domain state stabilization by iterated thermal magnetization processes. <i>Geophysical Journal International</i> , 2004, 159, 486-494. | 2.4 | 12 |
| 95 | Statistical theory of weak field thermoremanent magnetization in multidomain particle ensembles. <i>Geophysical Journal International</i> , 2003, 155, 479-488. | 2.4 | 17 |
| 96 | Some additional parameters to estimate domain state from isothermal magnetization measurements. <i>Earth and Planetary Science Letters</i> , 2003, 213, 337-345. | 4.4 | 86 |
| 97 | A theoretical treatment of paleointensity determination experiments on rocks containing pseudo-single or multi domain magnetic particles. <i>Earth and Planetary Science Letters</i> , 2001, 188, 45-58. | 4.4 | 67 |
| 98 | Acquisition of thermoremanent magnetization in weak magnetic fields. <i>Geophysical Journal International</i> , 2000, 142, 478-486. | 2.4 | 33 |
| 99 | Shape-induced pseudo-single-domain remanence. <i>Geophysical Journal International</i> , 1999, 138, 717-726. | 2.4 | 23 |
| 100 | Magnetic domain structure of multidomain magnetite as a function of temperature: observation by Kerr microscopy. <i>Physics of the Earth and Planetary Interiors</i> , 1999, 112, 55-80. | 1.9 | 24 |
| 101 | Magnetic states of small cubic particles with uniaxial anisotropy. <i>Journal of Magnetism and Magnetic Materials</i> , 1998, 190, 332-348. | 2.3 | 136 |
| 102 | Isothermal magnetization of samples with stable Preisach function: A survey of hysteresis, remanence, and rock magnetic parameters. <i>Journal of Geophysical Research</i> , 1997, 102, 17659-17677. | 3.3 | 47 |
| 103 | Magnetic blocking temperatures of magnetite calculated with a three-dimensional micromagnetic model. <i>Journal of Geophysical Research</i> , 1997, 102, 22695-22709. | 3.3 | 97 |
| 104 | Magnetic susceptibility and remanent coercive force in grown magnetite crystals from 0.1 μ m to 6 mm. <i>Physics of the Earth and Planetary Interiors</i> , 1996, 93, 239-256. | 1.9 | 144 |
| 105 | How to include magnetostriction in micromagnetic models of titanomagnetite grains. <i>Geophysical Research Letters</i> , 1996, 23, 2839-2842. | 4.0 | 18 |
| 106 | Three-dimensional micromagnetic calculations for magnetite using FFT. <i>Geophysical Journal International</i> , 1996, 124, 89-104. | 2.4 | 147 |
| 107 | An Enigma in Rock Magnetism: Can Microstructures in Magnetite Cause a Threefold Increase in the Efficiency of NRM Acquisition in the Stardalur Basalts?. <i>Geophysical Journal International</i> , 0, , . | 2.4 | 2 |