

# Rudy Swennen

## List of Publications by Year in descending order

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93  
papers

2,068  
citations

279798

23  
h-index

289244

40  
g-index

96  
all docs

96  
docs citations

96  
times ranked

1998  
citing authors

#	ARTICLE	IF	CITATIONS
1	Applications of X-ray computed tomography in the geosciences. Geological Society Special Publication, 2003, 215, 1-6.	1.3	265
2	Biological and diagenetic influence in Recent and fossil tufa deposits from Belgium. Sedimentary Geology, 1999, 126, 75-95.	2.1	125
3	Acoustic properties in travertines and their relation to porosity and pore types. Marine and Petroleum Geology, 2015, 59, 320-335.	3.3	92
4	Zebra dolomitization as a result of focused fluid flow in the Rocky Mountains Fold and Thrust Belt, Canada. Sedimentology, 2005, 52, 1067-1095.	3.1	70
5	Sedimentology, three-dimensional geobody reconstruction and carbon dioxide origin of Pleistocene travertine deposits in the Ballıkkaya area (southwest Turkey). Sedimentology, 2015, 62, 1408-1445.	3.1	69
6	Hyperspectral image analysis of different carbonate lithologies (limestone, karst and hydrothermal) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 623-645.	3.1	68
7	Shrub morpho-types as indicator for the water flow energy - Tivoli travertine case (Central Italy). Sedimentary Geology, 2017, 347, 79-99.	2.1	57
8	Paragenesis of Cretaceous to Eocene carbonate reservoirs in the Ionian fold and thrust belt (Albania): relation between tectonism and fluid flow. Sedimentology, 2002, 49, 697-718.	3.1	56
9	Shrub and pore type classification: Petrography of travertine shrubs from the Ballıkkaya-Belevi area (Denizli, SW Turkey). Quaternary International, 2017, 437, 147-163.	1.5	55
10	Fracture networks and strike-slip deformation along reactivated normal faults in Quaternary travertine deposits, Denizli Basin, western Turkey. Tectonophysics, 2013, 588, 154-170.	2.2	51
11	Considering economic and geological uncertainty in the simulation of realistic investment decisions for CO <sub>2</sub> -EOR projects in the North Sea. Applied Energy, 2017, 185, 745-761.	10.1	51
12	Photogrammetric digital outcrop reconstruction, visualization with textured surfaces, and three-dimensional structural analysis and modeling: Innovative methodologies applied to fault-related dolomitization (Vajont Limestone, Southern Alps, Italy). , 2015, 11, 2031-2048.		49
13	New insight into the microtexture of chalks from NMR analysis. Marine and Petroleum Geology, 2016, 75, 252-271.	3.3	45
14	Palaeoclimate controlled diagenesis of the Westphalian C & D fluvial sandstones in the Campine Basin (northeast Belgium). Sedimentology, 2008, 55, 1375-1417.	3.1	39
15	Multiple dolomitization events along the Pozalagua Fault (Pozalagua Quarry, Basque Cantabrian) Tj ETQq1 1 0.784314 rgBT /Overlock 35	3.1	35
16	Measuring the effective diffusion coefficient of dissolved hydrogen in saturated Boom Clay. Applied Geochemistry, 2015, 61, 175-184.	3.0	32
17	Spheroidal dolomites in a Visean karst system - bacterial induced origin?. Sedimentology, 1997, 44, 177-195.	3.1	31
18	Sedimentological and diagenetic control on the reservoir quality of deep-lacustrine sedimentary gravity flow sand reservoirs of the Upper Triassic Yanchang Formation in Southern Ordos Basin, China. Marine and Petroleum Geology, 2020, 112, 104050.	3.3	31

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19	Novel applications of fluid inclusions and isotope geochemistry in unravelling the genesis of fossil travertine systems. <i>Sedimentology</i> , 2015, 62, 27-56.	3.1	30
20	Characteristics, genesis and parameters controlling the development of a large stratabound HTD body at Matienzo (Ramales Platform, Basque Cantabrian Basin, northern Spain). <i>Marine and Petroleum Geology</i> , 2014, 55, 6-25.	3.3	28
21	Computed Tomography 3D Super-Resolution with Generative Adversarial Neural Networks: Implications on Unsaturated and Two-Phase Fluid Flow. <i>Materials</i> , 2020, 13, 1397.	2.9	28
22	Geobody architecture, genesis and petrophysical characteristics of the Budakalász travertines, Buda Hills (Hungary). <i>Quaternary International</i> , 2017, 437, 107-128.	1.5	25
23	Nested multiresolution hierarchical simulated annealing algorithm for porous media reconstruction. <i>Physical Review E</i> , 2019, 100, 053316.	2.1	25
24	Fluid flow and diagenesis in carbonate dominated Foreland Fold and Thrust Belts: petrographic inferences from field studies of late-diagenetic fabrics from Albania, Belgium, Canada, Mexico and Pakistan. <i>Journal of Geochemical Exploration</i> , 2003, 78-79, 481-485.	3.2	24
25	Fluid flow compartmentalization in the Sicilian fold and thrust belt: Implications for the regional aqueous fluid flow and oil migration history. <i>Tectonophysics</i> , 2013, 591, 194-209.	2.2	24
26	Contribution to the understanding of the Ionian Basin sedimentary evolution along the eastern edge of Apulia during the Late Cretaceous in Albania. <i>Sedimentary Geology</i> , 2015, 317, 87-101.	2.1	24
27	Fluid pressure cycles, variations in permeability, and weakening mechanisms along low-angle normal faults: The Tellaro detachment, Italy. <i>Bulletin of the Geological Society of America</i> , 2015, 127, 1689-1710.	3.3	23
28	Interplay of molecular size and pore network geometry on the diffusion of dissolved gases and HTO in Boom Clay. <i>Applied Geochemistry</i> , 2017, 76, 182-195.	3.0	23
29	Hierarchical approach to define travertine depositional systems: 3D conceptual morphological model and possible applications. <i>Marine and Petroleum Geology</i> , 2019, 103, 549-563.	3.3	23
30	Geobody architecture of continental carbonates: the Gazda travertine quarry (Sătt, Gerecse Hills, Hungary). <i>Journal of Geochemical Exploration</i> , 2015, 150, 1-11.	1.5	21
31	Elemental geochemistry to complement stable isotope data of fossil travertine: Importance of digestion method and statistics. <i>Sedimentary Geology</i> , 2019, 386, 118-131.	2.1	21
32	Diagenesis and fracturing of Paleocene-Eocene carbonate turbidite systems in the Ionian Basin: The example of the Këlšyra area (Albania). <i>Journal of Geochemical Exploration</i> , 2006, 89, 409-413.	3.2	20
33	A three-dimensional classification for mathematical pore shape description in complex carbonate reservoir rocks. <i>Mathematical Geosciences</i> , 2016, 48, 619-639.	2.4	20
34	Comparative study of the Pleistocene Cakmak quarry (Denizli Basin, Turkey) and modern Mammoth Hot Springs deposits (Yellowstone National Park, USA). <i>Quaternary International</i> , 2017, 437, 129-146.	1.5	20
35	Contractional Overprinting Between Extension and Shortening Along the Montagna Dei Fiori Fault During Plio-Pleistocene Antiformal Stacking at the Central Apennines Thrust Wedge Toe. <i>Tectonics</i> , 2018, 37, 3690-3720.	2.8	19
36	Unraveling chalk microtextural properties from indentation tests. <i>Engineering Geology</i> , 2016, 209, 30-43.	6.3	18

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37	Sedimentological and marine eogenetic control on porosity distribution in Upper Cretaceous carbonate turbidites (central Albania). <i>Sedimentology</i> , 2007, 54, 243-264.	3.1	17
38	Chromium speciation and existing natural attenuation conditions in lagoonal and pond sediments in the former chemical plant of Porto-Romano (Albania). <i>Environmental Geology</i> , 2008, 53, 1107-1128.	1.2	16
39	Model for calcite spherulite formation in organic, clay-rich, lacustrine carbonate shales (Barbalha) Tj ETQq1 1 0.784314 rgBT /Overloc 3.3 16		
40	Relationships between geomechanical properties and lithotypes in NW European chalks. <i>Geological Society Special Publication</i> , 2017, 458, 227-244.	1.3	15
41	Evaluating the geogenic CO <sub>2</sub> flux from geothermal areas by analysing quaternary travertine masses. New data from western central Italy and review of previous CO <sub>2</sub> flux data. <i>Quaternary Science Reviews</i> , 2019, 215, 132-143.	3.0	15
42	ANC, BNC and mobilization of Cr from polluted sediments in function of pH changes. <i>Environmental Geology</i> , 2009, 56, 1663-1678.	1.2	14
43	Substrate geology controlling different morphology, sedimentology, diagenesis and geochemistry of adjacent travertine bodies: A case study from the Sanandaj-Sirjan zone (western Iran). <i>Sedimentary Geology</i> , 2019, 389, 127-146.	2.1	14
44	Multiscale approach to (micro)porosity quantification in continental spring carbonate facies: Case study from the Cakmak quarry (Denizli, Turkey). <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 2922-2939.	2.5	13
45	The Dependency of Diffusion Coefficients and Geometric Factor on the Size of the Diffusing Molecule: Observations for Different Clay-Based Materials. <i>Geofluids</i> , 2017, 2017, 1-16.	0.7	13
46	Economic threshold of CO <sub>2</sub> -EOR and CO <sub>2</sub> storage in the North Sea: A case study of the Claymore, Scott and Buzzard oil fields. <i>International Journal of Greenhouse Gas Control</i> , 2018, 78, 271-285.	4.6	13
47	A multi-“methodological approach to reconstruct the configuration of a travertine fissure ridge system: The case of the Cukor quarry (SÁ¼ttÁ¼, Gerecse Hills, Hungary). <i>Geomorphology</i> , 2019, 345, 106836.	2.6	13
48	Fault-controlled dolomitization in the Montagna dei Fiori Anticline (Central Apennines, Italy): record of a dominantly pre-orogenic fluid migration. <i>Solid Earth</i> , 2019, 10, 1355-1383.	2.8	13
49	High geogenic arsenic concentrations in travertines and their spring waters: Assessment of the leachability and estimation of ecological and health risks. <i>Journal of Hazardous Materials</i> , 2021, 409, 124429.	12.4	13
50	Understanding Fluid Flow during Tectonic Reactivation: An Example from the Flamborough Head Chalk Outcrop (UK). <i>Geofluids</i> , 2018, 2018, 1-17.	0.7	12
51	Comment on “First records of syn-diagenetic non-tectonic folding in Quaternary thermogene travertines caused by hydrothermal incremental veining” by Billi et al. <i>Tectonophysics</i> 700“701 (2017) 60“79. <i>Tectonophysics</i> , 2017, 721, 491-500.	2.2	11
52	Pleistocene-Holocene tectonic reconstruction of the BallÅ¼k travertine (Denizli Graben, SW Turkey): (De)formation of large travertine geobodies at intersecting grabens. <i>Journal of Structural Geology</i> , 2019, 118, 114-134.	2.3	11
53	Fossil travertine system and its palaeofluid provenance, migration and evolution through time: Example from the geothermal area of Acquasanta Terme (Central Italy). <i>Sedimentary Geology</i> , 2020, 398, 105580.	2.1	11
54	Lattice Boltzmann Simulations of Fluid Flow in Continental Carbonate Reservoir Rocks and in Upscaled Rock Models Generated with Multiple-Point Geostatistics. <i>Geofluids</i> , 2017, 2017, 1-24.	0.7	10

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55	Geological and mechanical study of argillaceous North Sea chalk: Implications for the characterisation of fractured reservoirs. <i>Marine and Petroleum Geology</i> , 2018, 92, 962-978.	3.3	10
56	Granulomatous lung disease in two workers making light bulbs. <i>American Journal of Industrial Medicine</i> , 2019, 62, 908-913.	2.1	10
57	The dismantling of the Apulian carbonate platform during the late Campanian – early Maastrichtian in Albania. <i>Cretaceous Research</i> , 2019, 96, 83-106.	1.4	10
58	Lateral and vertical variations in sedimentology and geochemistry of sub-horizontal laminated travertines (Ağakmak quarry, Denizli Basin, Turkey). <i>Quaternary International</i> , 2020, 540, 146-168.	1.5	10
59	Relationship between the sedimentary microfacies and geomechanical behavior of the Asmari Formation carbonates, southwestern Iran. <i>Marine and Petroleum Geology</i> , 2020, 116, 104306.	3.3	10
60	Characterizing carbonate reservoir fracturing from borehole data – A case study of the Viséan in northern Belgium. <i>Marine and Petroleum Geology</i> , 2020, 111, 375-389.	3.3	9
61	Hydrogeochemistry, stable isotope composition and geothermometry of CO <sub>2</sub> -bearing hydrothermal springs from Western Iran: Evidence for their origin, evolution and spatio-temporal variations. <i>Sedimentary Geology</i> , 2020, 404, 105676.	2.1	9
62	Petrographic and geochemical characteristics of deep-lacustrine organic-rich mudstone and shale of the Upper Triassic Chang 7 member in the southern Ordos Basin, northern China: Implications for shale oil exploration. <i>Journal of Asian Earth Sciences</i> , 2022, 227, 105118.	2.3	9
63	3D soil image characterization applied to hydraulic properties computation. <i>Geological Society Special Publication</i> , 2003, 215, 167-176.	1.3	8
64	Strategy for ranking potential CO <sub>2</sub> storage reservoirs: A case study for Belgium. <i>International Journal of Greenhouse Gas Control</i> , 2013, 17, 431-449.	4.6	8
65	Meter-scale cycles as a proxy for the evolution of the Apulian Carbonate Platform during the late Cretaceous (Llogara Pass, Albania). <i>Facies</i> , 2015, 61, 1.	1.4	8
66	Stratigraphic architecture and depositional – diagenetic evolution of Oligocene – Miocene carbonate – evaporite platform in the southern margin of the Neo-Tethys Ocean, Lurestan zone of Zagros, Iran. <i>Journal of Asian Earth Sciences</i> , 2022, 233, 105249.	2.3	8
67	Unravelling the pore network and its behaviour: An integrated NMR, MICP, XCT and petrographical study of continental spring carbonates from the Ballıkk area, SW Turkey. <i>Depositional Record</i> , 2022, 8, 292-316.	1.7	7
68	Improving preservation state assessment of carbonate microfossils in paleontological research using label-free stimulated Raman imaging. <i>PLoS ONE</i> , 2018, 13, e0199695.	2.5	6
69	Porosity, bulk density and CaCO <sub>3</sub> content of travertines. A new dataset from Rapolano, Canino and Tivoli travertines (Italy). <i>Data in Brief</i> , 2019, 25, 104158.	1.0	6
70	Distribution of geomechanical units constrained by sequence stratigraphic framework: Useful data improving reservoir characterization. <i>Marine and Petroleum Geology</i> , 2020, 117, 104398.	3.3	6
71	Non-marine carbonates: A multidisciplinary approach. <i>Quaternary International</i> , 2017, 437, 1-3.	1.5	5
72	The relation between petrophysical and transport properties of the Boom Clay and Eigenbilzen Sands. <i>Applied Geochemistry</i> , 2020, 114, 104527.	3.0	5

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73	Investigations on the shale oil and gas potential of Westphalian mudstone successions in the Campine Basin, NE Belgium (well KB174): Palaeoenvironmental and palaeogeographical controls. <i>Geologica Belgica</i> , 2016, 19, 225-235.	1.1	5
74	Sedimentology and lithofacies of organic-rich Namurian Shale, Namur Synclinorium and Campine Basin (Belgium and S-Netherlands). <i>Marine and Petroleum Geology</i> , 2022, 138, 105553.	3.3	5
75	3D reconstruction of the <i>Lapis Tiburtinus</i> (Tivoli, Central Italy): The control of climatic and sea-level changes on travertine deposition. <i>Basin Research</i> , 2021, 33, 2605-2635.	2.7	4
76	Sedimentary and diagenetic effects on reservoir properties of Upper Cretaceous Ionian Basin and Kruja platform carbonates, Albania. <i>Marine and Petroleum Geology</i> , 2022, 138, 105549.	3.3	4
77	Characteristics and migration mechanisms of natural gas in tight sandstone reservoirs in the Longfengshan sag, Songliao Basin, China. <i>Journal of Petroleum Science and Engineering</i> , 2019, 174, 456-467.	4.2	3
78	Depositional and diagenetic constraints on the quality of shale-gas reservoirs: A case study from the Late Palaeocene of the Potwar Basin (Pakistan, Eastern Tethys). <i>Geological Journal</i> , 2022, 57, 2770-2787.	1.3	3
79	Geochemical, geological, and petrophysical evaluation of Garau Formation in Lurestan basin (west of Tj ETQq1 1 0.784314 rgBT /Over	1.3	2
80	Diagenesis and reservoir characteristics of the Lithocodium-Bacinella facies in a Lower Cretaceous reservoir, eastern Persian Gulf Basin. <i>Facies</i> , 2020, 66, 1.	1.4	2
81	Linking petrographical and petrophysical properties to transport characteristics: A case from Boom Clay and Eigenbilzen Sands. <i>Applied Clay Science</i> , 2020, 190, 105568.	5.2	2
82	The role of tectonic activity, topographic gradient and river flood events in the Testina travertine (Acque Albule Basin, Tivoli, Central Italy). <i>Depositional Record</i> , 2022, 8, 266-291.	1.7	2
83	Lower carboniferous fractured carbonates of the Campine Basin (NE-Belgium) as potential geothermal reservoir: Age and origin of open carbonate veins. <i>Geothermics</i> , 2021, 96, 102147.	3.4	2
84	The giant quaternary Ballik travertine system in the Denizli basin (SW Turkey): a palaeoenvironmental analysis. <i>Quaternaire</i> , 2020, , 91-116.	0.2	2
85	Stratigraphical reinterpretation of Devonian strata underlying the Mons Basin based on cuttings from the Saint-Ghislain borehole, Hainaut, Belgium. <i>Geologica Belgica</i> , 2020, 23, 29-39.	1.1	2
86	Meteoric freshwater leaching and its significance to reservoir quality in a buried hill of lower-middle Jurassic fluvial sandstones: A case study from the Huanghua Depression, Bohai Bay Basin, China. <i>Journal of Petroleum Science and Engineering</i> , 2022, 210, 109834.	4.2	2
87	2012 Paris Geofluids <sc>VII</sc> Conference Summary & Thematic Issue. <i>Geofluids</i> , 2013, 13, 99-100.	0.7	1
88	Fracture characteristics of Lower Carboniferous carbonates in northern Belgium based on FMI log analyses. <i>Geologie En Mijnbouw/Netherlands Journal of Geosciences</i> , 2020, 99, .	0.9	1
89	A techno-economic approach for capacity assessment and ranking of potential options for geological storage of CO <sub>2</sub> in Austria. <i>Geologica Belgica</i> , 2016, 19, 237-249.	1.1	1
90	Structural Controls on Basin- and Crustal-Scale Fluid Flow and Resulting Mineral Reactions. <i>Geofluids</i> , 2022, 2022, 1-6.	0.7	1

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91	Petrography and geochemical constrain on dolostones of the Shahbazan Formation in Lorestan (Iran). <i>Carbonates and Evaporites</i> , 2019, 34, 115-132.	1.0	0
92	Petrographical and mineralogical study of detrital strata near and within the Ballıkk travertine deposit (SW Turkey): architecture of a mixed clasticâ€“carbonate succession. <i>International Journal of Earth Sciences</i> , 2021, 110, 1049-1071.	1.8	0
93	Dolomitization of the Middle Jurassic limestones at the Vajont Canyon (Southern Alps, Italy): Fault-controlled dolomitization by hypo-to mesosaline fluids. <i>Marine and Petroleum Geology</i> , 2022, , 105837.	3.3	0