Ben Smith

List of Publications by Year
in descending order

43 papers	7,104 citations	159525 30 h-index	265120 42 g-index
66 all docs	66 docs citations	66 times ranked	5690 citing authors

#	Article	IF	Citations
1	A Reconciled Estimate of Ice-Sheet Mass Balance. Science, 2012, 338, 1183-1189.	6.0	1,246
2	Marine Ice Sheet Collapse Potentially Under Way for the Thwaites Glacier Basin, West Antarctica. Science, 2014, 344, 735-738.	6.0	651
3	The Ice, Cloud, and land Elevation Satellite-2 (ICESat-2): Science requirements, concept, and implementation. Remote Sensing of Environment, 2017, 190, 260-273.	4.6	600
4	An automated, open-source pipeline for mass production of digital elevation models (DEMs) from very-high-resolution commercial stereo satellite imagery. ISPRS Journal of Photogrammetry and Remote Sensing, 2016, 116, 101-117.	4.9	447
5	The Greenland Ice Mapping Project (GIMP) land classification and surface elevation data sets. Cryosphere, 2014, 8, 1509-1518.	1.5	401
6	Seasonal Speedup Along the Western Flank of the Greenland Ice Sheet. Science, 2008, 320, 781-783.	6.0	383
7	The Reference Elevation Model of Antarctica. Cryosphere, 2019, 13, 665-674.	1.5	357
8	An inventory of active subglacial lakes in Antarctica detected by ICESat (2003â€“2008). Journal of Glaciology, 2009, 55, 573-595.	1.1	291
9	Pervasive ice sheet mass loss reflects competing ocean and atmosphere processes. Science, 2020, 368, 1239-1242.	6.0	261
10	Increased flow speed on a large East Antarctic outlet glacier caused by subglacial floods. Nature Geoscience, 2008, 1, 827-831.	5.4	242
11	Continued evolution of Jakobshavn Isbrae following its rapid speedup. Journal of Geophysical Research, 2008, 113, .	3.3	202
12	Sensitivity of 21st century sea level to oceanâ€induced thinning of Pine Island Glacier, Antarctica. Geophysical Research Letters, 2010, 37, .	1.5	199
13	Distinct patterns of seasonal Greenland glacier velocity. Geophysical Research Letters, 2014, 41, 7209-7216.	1.5	190
14	Observed rapid bedrock uplift in Amundsen Sea Embayment promotes ice-sheet stability. Science, 2018, 360, 1335-1339.	6.0	147
15	Seasonal to multiyear variability of glacier surface velocity, terminus position, and sea ice/ice mÃ©lange in northwest Greenland. Journal of Geophysical Research F: Earth Surface, 2015, 120, 818-833.	1.0	121
16	Brief Communication: Further summer speedup of Jakobshavn IsbrÃ¦. Cryosphere, 2014, 8, 209-214.	1.5	120
17	Airborneâ€radar and iceâ€core observations of annual snow accumulation over Thwaites Glacier, West Antarctica confirm the spatiotemporal variability of global and regional atmospheric models. Geophysical Research Letters, 2013, 40, 3649-3654.	1.5	119
18	Mass balance of Greenland's three largest outlet glaciers, 2000-2010. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	116

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19	Land ice height-retrieval algorithm for NASA's ICESat-2 photon-counting laser altimeter. Remote Sensing of Environment, 2019, 233, 111352.	4.6	113
20	Assessment of ICESatâ€2 Ice Sheet Surface Heights, Based on Comparisons Over the Interior of the Antarctic Ice Sheet. Geophysical Research Letters, 2019, 46, 13072-13078.	1.5	102
21	Regularized Coulomb Friction Laws for Ice Sheet Sliding: Application to Pine Island Glacier, Antarctica. Geophysical Research Letters, 2019, 46, 4764-4771.	1.5	93
22	Constraining the recent mass balance of Pine Island and Thwaites glaciers, West Antarctica, with airborne observations of snow accumulation. Cryosphere, 2014, 8, 1375-1392.	1.5	90
23	Influence of ice-sheet geometry and supraglacial lakes on seasonal ice-flow variability. Cryosphere, 2013, 7, 1185-1192.	1.5	80
24	Connected subglacial lake drainage beneath Thwaites Glacier, West Antarctica. Cryosphere, 2017, 11, 451-467.	1.5	70
25	The Scientific Legacy of NASAâ€™s Operation IceBridge. Reviews of Geophysics, 2021, 59, e2020RG000712.	9.0	49
26	Mass balance of the ice sheets and glaciers â€“ Progress since AR5 and challenges. Earth-Science Reviews, 2020, 201, 102976.	4.0	44
27	Ice-shelf retreat drives recent Pine Island Glacier speedup. Science Advances, 2021, 7, .	4.7	44
28	Ice shelf basal melt rates from a high-resolution digital elevation model (DEM) record for Pine Island Glacier, Antarctica. Cryosphere, 2019, 13, 2633-2656.	1.5	42
29	A low-frequency ice-penetrating radar system adapted for use from an airplane: test results from Bering and Malaspina Glaciers, Alaska, USA. Annals of Glaciology, 2009, 50, 93-97.	2.8	41
30	A decade of variability on Jakobshavn IsbrÃ¦: ocean temperatures pace speed through influence on mÃ©lange rigidity. Cryosphere, 2020, 14, 211-227.	1.5	39
31	Comparisons of Satellite and Airborne Altimetry With Groundâ€Based Data From the Interior of the Antarctic Ice Sheet. Geophysical Research Letters, 2021, 48, e2020GL090572.	1.5	26
32	Brief Communication: Sudden drainage of a subglacial lake beneath the Greenland Ice Sheet. Cryosphere, 2015, 9, 103-108.	1.5	24
33	Changes in flow of Crosson and Dotson ice shelves, West Antarctica, in response to elevated melt. Cryosphere, 2018, 12, 1415-1431.	1.5	16
34	Measuring Height Change Around the Periphery of the Greenland Ice Sheet With Radar Altimetry. Frontiers in Earth Science, 2019, 7, .	0.8	16
35	Brief communication: Heterogenous thinning and subglacial lake activity on Thwaites Glacier, West Antarctica. Cryosphere, 2020, 14, 4603-4609.	1.5	13
36	Modeling biases in laser-altimetry measurements caused by scattering of green light in snow. Remote Sensing of Environment, 2018, 215, 398-410.	4.6	10

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37	Melt at grounding line controls observed and future retreat of Smith, Pope, and Kohler glaciers. Cryosphere, 2019, 13, 2817-2834.	1.5	10
38	Abrupt Common Era hydroclimate shifts drive west Greenland ice cap change. Nature Geoscience, 2021, 14, 756-761.	5.4	9
39	Ocean-induced melt volume directly paces ice loss from Pine Island Glacier. Science Advances, 2021, 7, eabi5738.	4.7	9
40	A Generalized Interpolation Material Point Method for Shallow Ice Shelves. 2: Anisotropic Nonlocal Damage Mechanics and Rift Propagation. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002292.	1.3	6
41	Light propagation in firn: application to borehole video. Journal of Glaciology, 2010, 56, 614-624.	1.1	3
42	A Generalized Interpolation Material Point Method for Shallow Ice Shelves. 1: Shallow Shelf Approximation and Ice Thickness Evolution. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002277.	1.3	2
43	Repeat warming in Greenland. Nature Geoscience, 2012, 5, 369-370.	5.4	0