

Richard H Grant

List of Publications by Year in descending order

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96
papers

1,661
citations

279798

23
h-index

330143

37
g-index

98
all docs

98
docs citations

98
times ranked

1425
citing authors

#	ARTICLE	IF	CITATIONS
1	Partitioning of biologically active radiation in plant canopies. <i>International Journal of Biometeorology</i> , 1997, 40, 26-40.	3.0	107
2	Ultraviolet leaf reflectance of common urban trees and the prediction of reflectance from leaf surface characteristics. <i>Agricultural and Forest Meteorology</i> , 2003, 120, 127-139.	4.8	98
3	Photosynthetically-active radiation: sky radiance distributions under clear and overcast conditions. <i>Agricultural and Forest Meteorology</i> , 1996, 82, 267-292.	4.8	68
4	Obscured Overcast Sky Radiance Distributions for Ultraviolet and Photosynthetically Active Radiation. <i>Journal of Applied Meteorology and Climatology</i> , 1997, 36, 1336-1345.	1.7	66
5	Partitioning of biologically active radiation in plant canopies. <i>International Journal of Biometeorology</i> , 1997, 40, 26-40.	3.0	61
6	Effects of Supplementary Ultraviolet-B Irradiance on Maize Yield and Qualities: A Field Experiment. <i>Photochemistry and Photobiology</i> , 2004, 80, 127.	2.5	58
7	Clear sky radiance distributions in ultraviolet wavelength bands. <i>Theoretical and Applied Climatology</i> , 1997, 56, 123-135.	2.8	56
8	Ammonia Emission Model for Whole Farm Evaluation of Dairy Production Systems. <i>Journal of Environmental Quality</i> , 2014, 43, 1143-1158.	2.0	56
9	Ultraviolet radiation in urban ecosystems with consideration of effects on human health. <i>Urban Ecosystems</i> , 2000, 4, 193-229.	2.4	53
10	Biologically Active Radiation in the Vicinity of a Single Tree. <i>Photochemistry and Photobiology</i> , 1997, 65, 974-982.	2.5	52
11	Estimation of Ultraviolet-B Irradiance under Variable Cloud Conditions. <i>Journal of Applied Meteorology and Climatology</i> , 2000, 39, 904-916.	1.7	52
12	Estimation of Pedestrian Level UV Exposure Under Trees. <i>Photochemistry and Photobiology</i> , 2002, 75, 369.	2.5	41
13	Scattering of ultraviolet and photosynthetically active radiation by sorghum bicolor: influence of epicuticular wax. <i>Agricultural and Forest Meteorology</i> , 1995, 75, 263-281.	4.8	36
14	Solar ultraviolet-B and photosynthetically active irradiance in the urban sub-canopy: A survey of influences. <i>International Journal of Biometeorology</i> , 1996, 39, 201-212.	3.0	34
15	Ultraviolet sky radiance distributions of translucent overcast skies. <i>Theoretical and Applied Climatology</i> , 1997, 58, 129-139.	2.8	32
16	Yield and yield formation of field winter wheat in response to supplemental solar ultraviolet-B radiation. <i>Agricultural and Forest Meteorology</i> , 2003, 120, 279-283.	4.8	31
17	The scaling of flow in vegetative structures. <i>Boundary-Layer Meteorology</i> , 1983, 27, 171-184.	2.3	30
18	Ability to predict daily solar radiation values from interpolated climate records for use in crop simulation models. <i>Agricultural and Forest Meteorology</i> , 2004, 127, 65-75.	4.8	30

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19	Individual- and scattered-tree influences on ultraviolet irradiance. <i>Agricultural and Forest Meteorology</i> , 2003, 120, 113-126.	4.8	29
20	Ultraviolet and Photosynthetically Active Bands: Plane Surface Irradiance at Corn Canopy Base. <i>Agronomy Journal</i> , 1991, 83, 391-396.	1.8	29
21	Modeling of urban treesâ€™ effects on reducing human exposure to UV radiation in Seoul, Korea. <i>Urban Forestry and Urban Greening</i> , 2014, 13, 785-792.	5.3	27
22	Methane and carbon dioxide emissions from manure storage facilities at two free-stall dairies. <i>Agricultural and Forest Meteorology</i> , 2015, 213, 102-113.	4.8	27
23	Aerosol transmission of a viable virus affecting swine: Explanation of an epizootic of pseudorabies. <i>International Journal of Biometeorology</i> , 1994, 38, 33-39.	3.0	25
24	Diffuse fraction of UV radiation under partly cloudy skies as defined by the Automated Surface Observation System (ASOS). <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	23
25	Precipitation and dew in a soybean canopy: Spatial variations in leaf wetness and implications for <i>Phakopsora pachyrhizi</i> infection. <i>Agricultural and Forest Meteorology</i> , 2009, 149, 1621-1627.	4.8	23
26	The mutual interference of spruce canopy structural elements. <i>Agricultural and Forest Meteorology</i> , 1984, 32, 145-156.	4.8	21
27	A Geometric Ultravioletâ€™ Radiation Transfer Model Applied to Vegetation Canopies. <i>Agronomy Journal</i> , 2002, 94, 475-482.	1.8	21
28	The influence of the sky radiance distribution on the flux density in the shadow of a tree crown. <i>Agricultural and Forest Meteorology</i> , 1985, 35, 59-70.	4.8	20
29	Multi-waveband Solar Irradiance on Tree-shaded Vertical and Horizontal Surfaces: Cloud-free and Partly Cloudy Skies. <i>Photochemistry and Photobiology</i> , 2001, 73, 24.	2.5	20
30	Biologically effective UV-B exposures of an oak-hickory forest understory during leaf-out. <i>Agricultural and Forest Meteorology</i> , 2005, 132, 28-43.	4.8	20
31	Ammonia emissions from anaerobic treatment lagoons at sow and finishing farms in Oklahoma. <i>Agricultural and Forest Meteorology</i> , 2013, 180, 203-210.	4.8	20
32	Ultraviolet irradiance of inclined planes at the top of plant canopies. <i>Agricultural and Forest Meteorology</i> , 1998, 89, 281-293.	4.8	18
33	Manure Ammonia and Hydrogen Sulfide Emissions from a Western Dairy Storage Basin. <i>Journal of Environmental Quality</i> , 2015, 44, 127-136.	2.0	18
34	The translation of turbulent wind energy to individual corn plant motion during senescence. <i>Boundary-Layer Meteorology</i> , 1991, 55, 161-176.	2.3	16
35	The intermittent vertical heat flux over a spruce forest canopy. <i>Boundary-Layer Meteorology</i> , 1986, 35, 317-330.	2.3	15
36	The vertical movement of adult western corn rootworms (<i>Diabrotica virgifera virgifera</i>) relative to the transport of momentum and heat. <i>Agricultural and Forest Meteorology</i> , 1990, 49, 191-203.	4.8	15

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37	Estimation of Photosynthetic Photon Flux Density from 368-nm Spectral Irradiance*. Journal of Atmospheric and Oceanic Technology, 2004, 21, 481-487.	1.3	15
38	Application of open-path Fourier transform infrared spectroscopy (OP-FTIR) to measure greenhouse gas concentrations from agricultural fields. Atmospheric Measurement Techniques, 2019, 12, 3403-3415.	3.1	15
39	Estimation of Ultraviolet-A Irradiance from Measurements of 368-nm Spectral Irradiance. Journal of Atmospheric and Oceanic Technology, 2005, 22, 1853-1863.	1.3	13
40	Ultraviolet radiation and its impacts on agriculture and forests. Agricultural and Forest Meteorology, 2003, 120, 3-7.	4.8	12
41	Effect of Cloud Cover on UVB Exposure Under Tree Canopies: Will Climate Change Affect UVB Exposure?. Photochemistry and Photobiology, 2006, 82, 487.	2.5	12
42	Comparison of a backward-Lagrangian stochastic and vertical radial plume mapping methods for estimating animal waste lagoon emissions. Agricultural and Forest Meteorology, 2013, 180, 236-248.	4.8	12
43	Hydrogen Sulfide Emissions from Sow Farm Lagoons across Climates Zones. Journal of Environmental Quality, 2013, 42, 1674-1683.	2.0	12
44	Potential Effect of Soybean Heliotropism on Ultravioletâ€B Irradiance and Dose. Agronomy Journal, 1999, 91, 1017-1023.	1.8	11
45	Ammonia emissions from an in-ground finisher hog manure tank. Atmospheric Environment, 2018, 190, 43-52.	4.1	11
46	Ammonia Emissions from Differing Manure Storage Facilities at Two Midwestern Free-Stall Dairies. Atmosphere, 2020, 11, 1108.	2.3	11
47	Ultraviolet-B and photosynthetically active radiation environment of inclined leaf surfaces in a maize canopy and implications for modeling. Agricultural and Forest Meteorology, 1999, 95, 187-201.	4.8	10
48	ODOR IMPACT DISTANCE GUIDELINE FOR SWINE PRODUCTION SYSTEMS. Proceedings of the Water Environment Federation, 2000, 2000, 773-788.	0.0	10
49	The influence of the physical attributes of a spruce shoot on momentum transfer. Agricultural and Forest Meteorology, 1985, 36, 7-18.	4.8	9
50	Areal-averaged trace gas emission rates from long-range open-path measurements in stable boundary layer conditions. Atmospheric Measurement Techniques, 2012, 5, 1571-1583.	3.1	9
51	Ammonia emissions from anaerobic waste lagoons at pork production operations: Influence of climate. Agricultural and Forest Meteorology, 2016, 228-229, 73-84.	4.8	9
52	Surface flux estimates derived from UAS-based mole fraction measurements by means of a nocturnal boundary layer budget approach. Atmospheric Measurement Techniques, 2020, 13, 1671-1692.	3.1	9
53	Full-scale comparison of a wind-tunnel simulation of windy locations in an urban area. Journal of Wind Engineering and Industrial Aerodynamics, 1988, 31, 335-341.	3.9	8
54	Digital measurement of heliotropic leaf response in soybean cultivars and leaf exposure to solar UVB radiation. Agricultural and Forest Meteorology, 2003, 120, 161-175.	4.8	8

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55	Assessment of ammonia emissions from swine facilities in the U.S. Application of knowledge from experimental research. <i>Environmental Science and Policy</i> , 2012, 22, 25-35.	4.9	8
56	Ozone profiles over a suburban neighborhood. <i>Atmospheric Environment</i> , 1998, 33, 51-63.	4.1	7
57	Spatial variability in UV radiation during the growing season across the continental USA. <i>Theoretical and Applied Climatology</i> , 2003, 74, 167-177.	2.8	7
58	Ultraviolet-B radiation in a row-crop canopy: an extended 1-D model. <i>Agricultural and Forest Meteorology</i> , 2003, 120, 141-151.	4.8	7
59	Wind Flow within Open-Top Growth Chambers and the Gas Exchange Implications. <i>Journal of Environmental Quality</i> , 1992, 21, 49-56.	2.0	6
60	Sources of error in open-path FTIR measurements of N_2O and CO_2 emitted from agricultural fields. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 2001-2013.	3.1	6
61	Shadow-band corrections for photosynthetically-active radiation under clear and overcast conditions. <i>Agricultural and Forest Meteorology</i> , 1997, 87, 213-222.	4.8	5
62	Surface Temperature Inversions and Risk of Off-Target Herbicide Damage in the Soybean- and Cotton-Growing Regions of the US. <i>Crop, Forage and Turfgrass Management</i> , 2019, 5, 180078.	0.6	5
63	Inclusion of an ultraviolet radiation transfer component in an urban forest effects model for predicting tree influences on potential below-canopy exposure to UVB radiation. , 2003, ,		4
64	Estimation of Pedestrian Level UV Exposure Under Trees. <i>Photochemistry and Photobiology</i> , 2007, 75, 369-376.	2.5	4
65	Estimation of nocturnal CO_2 and N_2O soil emissions from changes in surface boundary layer mass storage. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 2119-2133.	3.1	4
66	A Geometric Ultraviolet-B Radiation Transfer Model Applied to Vegetation Canopies. <i>Agronomy Journal</i> , 2002, 94, 475.	1.8	4
67	Forecasting solar photosynthetic photon flux density under cloud cover effects: novel predictive model using convolutional neural network integrated with long short-term memory network. <i>Stochastic Environmental Research and Risk Assessment</i> , 2022, 36, 3183-3220.	4.0	4
68	<title>Urban tree influences on ultraviolet irradiance</title> . , 2002, ,		3
69	Impact of cloud cover on erythral UV-B exposure under vegetation canopies. , 2004, ,		3
70	High UV-B Exposures in the Continental USA: Towards Realistic Short-term Exposure Regimes for Plant-effects Research. <i>Photochemistry and Photobiology</i> , 2005, 81, 1038.	2.5	3
71	Variation in hydrogen sulfide emissions from a U.S. Midwest anaerobic dairy lagoon. <i>Journal of Environmental Quality</i> , 2021, 50, 1063-1073.	2.0	3
72	<title>Modeling ultraviolet-B radiation in a maize canopy</title> . , 2002, ,		2

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73	Effect of epicuticular wax on UV scattering of sorghum leaves and canopies. , 2003, 5156, 236.		2
74	Effects of Supplementary Ultraviolet-B Irradiance on Maize Yield and Qualities: A Field Experiment. Photochemistry and Photobiology, 2004, 80, 127-131.	2.5	2
75	Solar Ultraviolet-B Radiation in Urban Environments: The Case of Baltimore, Maryland. Photochemistry and Photobiology, 2004, 80, 422-428.	2.5	2
76	Multi-waveband Solar Irradiance on Tree-shaded Vertical and Horizontal Surfaces: Cloud-free and Partly Cloudy Skies. Photochemistry and Photobiology, 2007, 73, 24-31.	2.5	2
77	Inhomogeneity of methane emissions from a dairy waste lagoon. Journal of the Air and Waste Management Association, 2015, 65, 1306-1316.	1.9	2
78	Yield and yield formation of winter wheat in response to enhanced solar ultraviolet-B radiation. , 2002, , .		2
79	Hydrogen sulfide emissions from a midwestern manure slurry storage basin. Journal of Environmental Quality, 2022, 51, 152-161.	2.0	2
80	Emissions of hydrogen sulfide from a western open-lot dairy. Journal of Environmental Quality, 2022, 51, 622-631.	2.0	2
81	Estimating the UV diffuse fraction of solar radiation under partly cloudy skies. , 2002, , .		1
82	Growth analytic simulation of soybean and winter wheat crops under different doses of UV-B irradiance. , 2003, , .		1
83	Spatial correlations of daily and weekly maximum day exposure of solar UV radiation in the continental United States. , 2003, , .		1
84	Ammonia Emissions from a Western Open-Lot Dairy. Atmosphere, 2020, 11, 913.	2.3	1
85	Physiological Impacts of Short-Term UV Irradiance Exposures on Cultivars of Glycine Max. , 2010, , 458-487.		1
86	UV Radiation Penetration in Plant Canopies. , 2004, , 1261-1264.		1
87	Solar Ultraviolet-B Radiation in Urban Environments: The Case of Baltimore, Maryland. Photochemistry and Photobiology, 2004, 80, 422.	2.5	1
88	Emissions of H ₂ S from Hog Finisher Farm Anaerobic Manure Treatment Lagoons: Physical, Chemical and Biological Influence. Atmosphere, 2022, 13, 153.	2.3	1
89	Estimating climate effects on the atmospheric contribution to the potential available inorganic nitrogen in eastern United States soils. Atmospheric Environment, 2002, 36, 1619-1630.	4.1	0
90	Defining the probabilities of solar UV event exposures for plant effects research. , 2003, , .		0

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91	Solar ultraviolet-B radiation in urban environments: Baltimore, Maryland. , 2003, , .		0
92	Response of different crop growth and yield to enhanced UV-B radiation under field conditions. , 2004, 5545, 102.		0
93	Effect of enhanced UV-B radiation combined with other climate stressors on winter wheat. , 2004, , .		0
94	Short-term impacts of elevated UV-B radiation on soybeans. , 2005, , .		0
95	The measurement and modeling of broadband UV-A irradiance. , 2005, 5886, 101.		0
96	Measuring N2O Emissions from Multiple Sources Using a Backward Lagrangian Stochastic Model. Atmosphere, 2020, 11, 1277.	2.3	0