Roel C G M Loonen

List of Publications by Year
in descending order

43 papers	1,722 citations	430442 18 h-index	414034 32 g-index
49 all docs	49 docs citations	49 times ranked	1428 citing authors

#	Article	IF	Citations
1	Climate adaptive building shells: State-of-the-art and future challenges. Renewable and Sustainable Energy Reviews, 2013, 25, 483-493.	8.2	427
2	Comparison of the energy saving potential of adaptive and controllable smart windows: A state-of-the-art review and simulation studies of thermochromic, photochromic and electrochromic technologies. Solar Energy Materials and Solar Cells, 2019, 200, 109828.	3.0	171
3	Review of current status, requirements and opportunities for building performance simulation of adaptive facades. Journal of Building Performance Simulation, 2017, 10, 205-223.	1.0	140
4	Current trends and future challenges in the performance assessment of adaptive façade systems. Energy and Buildings, 2018, 179, 165-182.	3.1	106
5	Electrically switchable polymer stabilised broadband infrared reflectors and their potential as smart windows for energy saving in buildings. Scientific Reports, 2015, 5, 11773.	1.6	102
6	User satisfaction and interaction with automated dynamic facades: A pilot study. Building and Environment, 2014, 78, 44-52.	3.0	88
7	Framework for assessing the performance potential of seasonally adaptable facades using multi-objective optimization. Energy and Buildings, 2014, 79, 106-113.	3.1	83
8	Application of broadband infrared reflector based on cholesteric liquid crystal polymer bilayer film to windows and its impact on reducing the energy consumption in buildings. Journal of Materials Chemistry A, 2014, 2, 14622.	5.2	77
9	Ultra-lightweight concrete: Energy and comfort performance evaluation in relation to buildings with low and high thermal mass. Energy and Buildings, 2017, 138, 432-442.	3.1	76
10	Simulation-based support for product development of innovative building envelope components. Automation in Construction, 2014, 45, 86-95.	4.8	66
11	Science foresight using life-cycle analysis, text mining and clustering: A case study on natural ventilation. Technological Forecasting and Social Change, 2017, 118, 270-280.	6.2	42
12	Investigating the potential of a closed-loop dynamic insulation system for opaque building elements. Energy and Buildings, 2018, 173, 409-427.	3.1	37
13	Occupant-Facade interaction: a review and classification scheme. Building and Environment, 2020, 177, 106880.	3.0	31
14	Investigating the energy saving potential of thermochromic coatings on building envelopes. Applied Energy, 2021, 291, 116788.	5.1	27
15	The solar noise barrier project 4: Modeling of full-scale luminescent solar concentrator noise barrier panels. Renewable Energy, 2020, 151, 1141-1149.	4.3	25
16	Ten questions concerning co-simulation for performance prediction of advanced building envelopes. Building and Environment, 2021, 191, 107570.	3.0	25
17	Data-driven inference of unknown tilt and azimuth of distributed PV systems. Solar Energy, 2020, 211, 418-432.	2.9	22
18	Building performance robustness assessment: Comparative study and demonstration using scenario analysis. Energy and Buildings, 2019, 202, 109362.	3.1	18

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19	Opportunities and pitfalls of using building performance simulation in explorative R&D contexts. Journal of Building Performance Simulation, 2019, 12, 272-288.	1.0	18
20	Moisture-participating MOF thermal battery for heat reallocation between indoor environment and building-integrated photovoltaics. Nano Energy, 2021, 87, 106224.	8.2	17
21	'Smart' lightâ€ʳeflective windows based on temperature responsive twisted nematic liquid crystal polymers. Journal of Polymer Science, 2021, 59, 1278-1284.	2.0	14
22	Bio-inspired Adaptive Building Skins. , 2015, , 115-134.		13
23	Dynamic Climate Analysis for early design stages: a new methodological approach to detect preferable Adaptive Opaque FaÃ§ade Responses. Sustainable Cities and Society, 2020, 60, 102232.	5.1	12
24	An unsupervised method for identifying local PV shading based on AC power and regional irradiance data. Solar Energy, 2018, 174, 1068-1077.	2.9	11
25	Multi-state vertical-blinds solar shading â€" Performance assessment and recommended development directions. Journal of Building Engineering, 2021, 40, 102743.	1.6	10
26	Simulation-aided development of automated solar shading control strategies using performance mapping and statistical classification. Journal of Building Performance Simulation, 2021, 14, 770-792.	1.0	9
27	Calculating solar irradiance without shading geometry: a point cloud-based method. Journal of Building Performance Simulation, 2021, 14, 480-502.	1.0	9
28	Techno-economic optimization for grid-friendly rooftop PV systems â€" A case study of commercial buildings in British Columbia. Sustainable Energy Technologies and Assessments, 2021, 47, 101320.	1.7	9
29	Computational performance analysis of overheating mitigation measures in parked vehicles. Applied Energy, 2018, 231, 635-644.	5.1	8
30	Angle-dependent optical properties of advanced fenestration systemsâ€"Finding a right balance between model complexity and prediction error. Building Simulation, 2019, 12, 113-127.	3.0	5
31	Performance variability and implications for yield prediction of rooftop PV systems â€" Analysis of 246 identical systems. Applied Energy, 2022, 322, 119550.	5.1	5
32	Sensitivity Analysis on Daylighting, Visual Comfort, and Energy Consumption of Automated Venetian Blinds for Open-Plan Offices in Tropical Climate. , 0, , .		3
33	Towards simulation-assisted performance monitoring of BIPV systems considering shading effects. , 2016, , .		2
34	Reduction in Grid-Buy Electricity and Elimination of AM & PM Energy Peaks/Spikes by Optimizing Energy Usage and Integration of Customer Self-Supply Rooftop Solar PV with Electrical & Thermal (Hot & Cold) Storage Batteries: A Case Study for Residential Hawaii. , 2017, , .		2
35	Infrared reflector based on liquid crystal polymers and its impact on thermal comfort conditions in buildings. Proceedings of SPIE, 2014, , .	0.8	1
36	Nomograms for de-complexing the dimensioning of off-grid PV systems. Renewable Energy, 2020, 161, 162-172.	4.3	1

#	Article	IF	Citations
37	Definition of a Reference Office Building for Simulation Based Evaluation of Solar Envelope Systems. , 2018, , .		1
38	Inverse design for advanced building envelope materials, systems and operation. , 2022, , 377-402.		1
39	Calibrating Perez Model Coefficients Using Subset Simulation. IOP Conference Series: Materials Science and Engineering, 2019, 556, 012017.	0.3	0
40	Towards an economically acceptable prevention of Legionnaireâ€™s disease. Gerontechnology, 2008, 7, .	0.0	0
41	Advanced fenestrationâ€"technologies, performance and building integration. , 2022, , 117-154.		0
42	Modeling of Partially Shaded BIPV Systems With BPS Tools â€" Towards Model Complexity Selection for Early Stage Design Support. , 0, , .		0
43	A New Method to Evaluate Environmental Conditions for Appropriate Sizing of PV-Battery Systems. , 0, , .		0