

Johan Hoefnagels

List of Publications by Citations

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128
papers

2,189
citations

27
h-index

42
g-index

138
ext. papers

2,495
ext. citations

3
avg, IF

5.22
L-index

#	Paper	IF	Citations
128	Strain localization and damage in dual phase steels investigated by coupled in-situ deformation experiments and crystal plasticity simulations. <i>International Journal of Plasticity</i> , 2014 , 63, 198-210	7.6	320
127	Microstructural banding effects clarified through micrographic digital image correlation. <i>Scripta Materialia</i> , 2010 , 62, 835-838	5.6	136
126	Experimental analysis of strain path dependent ductile damage mechanics and forming limits. <i>Mechanics of Materials</i> , 2009 , 41, 1264-1276	3.3	80
125	Block and sub-block boundary strengthening in lath martensite. <i>Scripta Materialia</i> , 2016 , 116, 117-121	5.6	64
124	Identification of the continuum damage parameter: An experimental challenge in modeling damage evolution. <i>Acta Materialia</i> , 2012 , 60, 3581-3589	8.4	61
123	Cavity ring down study of the densities and kinetics of Si and SiH in a remote Ar-H ₂ -SiH ₄ plasma. <i>Journal of Applied Physics</i> , 2001 , 89, 2065-2073	2.5	55
122	Interface debonding characterization by image correlation integrated with Double Cantilever Beam kinematics. <i>International Journal of Solids and Structures</i> , 2015 , 55, 79-91	3.1	54
121	Direct Stress-Strain Measurements from Bulged Membranes Using Topography Image Correlation. <i>Experimental Mechanics</i> , 2014 , 54, 717-727	2.6	52
120	Quasi-ice monolayer on atomically smooth amorphous SiO ₂ at room temperature observed with a high-finesse optical resonator. <i>Physical Review Letters</i> , 2005 , 95, 166104	7.4	46
119	Stretching-induced interconnect delamination in stretchable electronic circuits. <i>Journal Physics D: Applied Physics</i> , 2011 , 44, 034008	3	44
118	Cavity ring down detection of SiH ₃ in a remote SiH ₄ plasma and comparison with model calculations and mass spectrometry. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 467-476	2.9	44
117	On image gradients in digital image correlation. <i>International Journal for Numerical Methods in Engineering</i> , 2016 , 105, 243-260	2.4	42
116	Processing induced size effects in plastic yielding upon miniaturisation. <i>Journal of the Mechanics and Physics of Solids</i> , 2008 , 56, 2687-2706	5	41
115	Time-resolved integrated digital image correlation. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 103, 157-182	2.4	40
114	Crystal plasticity parameter identification with 3D measurements and Integrated Digital Image Correlation. <i>Acta Materialia</i> , 2016 , 116, 321-331	8.4	38
113	Plasticity of lath martensite by sliding of substructure boundaries. <i>Scripta Materialia</i> , 2016 , 120, 37-40	5.6	37
112	Ferrite slip system activation investigated by uniaxial micro-tensile tests and simulations. <i>Acta Materialia</i> , 2018 , 146, 314-327	8.4	36

111	Time-resolved cavity ringdown study of the Si and SiH ₃ surface reaction probability during plasma deposition of a-Si:H at different substrate temperatures. <i>Journal of Applied Physics</i> , 2004 , 96, 4094-4106	2.5	35
110	Copper/rubber interface delamination in stretchable electronics. <i>Scripta Materialia</i> , 2010 , 63, 875-878	5.6	34
109	Time-resolved cavity ring-down spectroscopic study of the gas phase and surface loss rates of Si and SiH ₃ plasma radicals. <i>Chemical Physics Letters</i> , 2002 , 360, 189-193	2.5	33
108	Incorporation of bioactive glass in calcium phosphate cement: material characterization and in vitro degradation. <i>Journal of Biomedical Materials Research - Part A</i> , 2013 , 101, 2365-73	5.4	31
107	A critical assessment of indentation-based ductile damage quantification. <i>Acta Materialia</i> , 2009 , 57, 4957-4966	3.1	31
106	Temperature dependence of the surface reactivity of SiH ₃ radicals and the surface silicon hydride composition during amorphous silicon growth. <i>Surface Science</i> , 2003 , 547, L865-L870	1.8	31
105	Improvement of hydrogenated amorphous silicon properties with increasing contribution of SiH ₃ to film growth. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 1027-1029	2.0	31
104	Absolute surface coverage measurement using a vibrational overtone. <i>Journal of Chemical Physics</i> , 2004 , 120, 2879-88	3.9	30
103	Multi-Axial Deformation Setup for Microscopic Testing of Sheet Metal to Fracture. <i>Experimental Mechanics</i> , 2012 , 52, 669-678	2.6	28
102	Retardation of plastic instability via damage-enabled microstrain delocalization. <i>Journal of Materials Science</i> , 2015 , 50, 6882-6897	4.3	27
101	A consistent full-field integrated DIC framework for HR-EBSD. <i>Ultramicroscopy</i> , 2018 , 191, 44-50	3.1	26
100	Quantification of Three-Dimensional Surface Deformation using Global Digital Image Correlation. <i>Experimental Mechanics</i> , 2014 , 54, 557-570	2.6	26
99	Comparison of the identification performance of conventional FEM updating and integrated DIC. <i>International Journal for Numerical Methods in Engineering</i> , 2016 , 106, 298-320	2.4	25
98	Indentation-based damage quantification revisited. <i>Scripta Materialia</i> , 2010 , 63, 316-319	5.6	23
97	Measuring time-dependent deformations in metallic MEMS. <i>Microelectronics Reliability</i> , 2011 , 51, 1054-1059	1.5	22
96	Correction of Scanning Electron Microscope Imaging Artifacts in a Novel Digital Image Correlation Framework. <i>Experimental Mechanics</i> , 2019 , 59, 489-516	2.6	21
95	In-situ characterization of interface delamination by a new miniature mixed mode bending setup. <i>International Journal of Fracture</i> , 2009 , 158, 183-195	2.3	19
94	Low temperature inorganic chemical vapor deposition of TiSi ₂ diffusion barrier liners for gigascale copper interconnect applications. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2000 , 18, 2011		19

93	Demonstrating the potential of accurate absolute cross-grain stress and orientation correlation using electron backscatter diffraction. <i>Scripta Materialia</i> , 2019 , 162, 266-271	5.6	19
92	Correction of scan line shift artifacts in scanning electron microscopy: An extended digital image correlation framework. <i>Ultramicroscopy</i> , 2018 , 187, 144-163	3.1	18
91	An improved miniature mixed-mode delamination setup for in situ microscopic interface failure analyses. <i>Journal Physics D: Applied Physics</i> , 2011 , 44, 034005	3	18
90	Characterization of time-dependent anelastic microbeam bending mechanics. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 355306	3	17
89	A Global Digital Image Correlation Enhanced Full-Field Bulge Test Method. <i>Procedia IUTAM</i> , 2012 , 4, 73-81		17
88	Microstructural study of the mechanical response of compacted graphite iron: An experimental and numerical approach. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 658, 439-449	5.3	16
87	Ultra-Stretchable Interconnects for High-Density Stretchable Electronics. <i>Micromachines</i> , 2017 , 8,	3.3	16
86	Irreversible mixed mode interface delamination using a combined damage-plasticity cohesive zone enabling unloading. <i>International Journal of Fracture</i> , 2014 , 185, 77-95	2.3	16
85	Martensite crystallography and chemistry in dual phase and fully martensitic steels. <i>Materials Characterization</i> , 2018 , 139, 411-420	3.9	15
84	Adaptive Isogeometric Digital Height Correlation: Application to Stretchable Electronics. <i>Strain</i> , 2016 , 52, 336-354	1.7	14
83	Bridging network properties to the effective hygro-expansivity of paper: experiments and modelling. <i>Philosophical Magazine</i> , 2015 , 95, 3385-3401	1.6	13
82	Potential-based constitutive models for cohesive interfaces: Theory, implementation and examples. <i>Composites Part B: Engineering</i> , 2015 , 68, 38-50	10	13
81	On the use of adaptive refinement in isogeometric digital image correlation. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 104, 944-962	2.4	13
80	Multi-scale experimental analysis of rate dependent metal-elastomer interface mechanics. <i>Journal of the Mechanics and Physics of Solids</i> , 2015 , 80, 26-36	5	13
79	On-wafer time-dependent high reproducibility nano-force tensile testing. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 495306	3	13
78	A brittle-fracture methodology for three-dimensional visualization of ductile deformation micromechanisms. <i>Scripta Materialia</i> , 2009 , 61, 20-23	5.6	13
77	Substrate temperature dependence of the roughness evolution of HWCVD a-Si:H studied by real-time spectroscopic ellipsometry. <i>Thin Solid Films</i> , 2006 , 501, 88-91	2.2	13
76	One-step deposition of nano-to-micron-scalable, high-quality digital image correlation patterns for high-strain in-situ multi-microscopy testing. <i>Strain</i> , 2019 , 55, e12330	1.7	12

75	Analysis of the dissipative mechanisms in metal/blastomer interfaces. <i>Engineering Fracture Mechanics</i> , 2015 , 149, 412-424	4.2	11
74	On the validity regime of the bulge equations. <i>Journal of Materials Research</i> , 2012 , 27, 1245-1250	2.5	10
73	Anisotropic hygro-expansion in hydrogel fibers owing to uniting 3D electrowriting and supramolecular polymer assembly. <i>European Polymer Journal</i> , 2020 , 141, 110099	5.2	9
72	Mixed-mode cohesive zone parameters from integrated digital image correlation on micrographs only. <i>International Journal of Solids and Structures</i> , 2019 , 156-157, 179-193	3.1	8
71	On the role of fibril mechanics in the work of separation of fibrillating interfaces. <i>Mechanics of Materials</i> , 2015 , 88, 1-11	3.3	8
70	Lath martensite plasticity enabled by apparent sliding of substructure boundaries. <i>Materials and Design</i> , 2019 , 172, 107646	8.1	7
69	Fracture behavior of tungsten-based composites exposed to steady-state/transient hydrogen plasma. <i>Nuclear Fusion</i> , 2020 , 60, 046029	3.3	7
68	On micromechanical parameter identification with integrated DIC and the role of accuracy in kinematic boundary conditions. <i>International Journal of Solids and Structures</i> , 2018 , 146, 241-259	3.1	7
67	A bulge test based methodology for characterizing ultra-thin buckled membranes. <i>Thin Solid Films</i> , 2018 , 660, 88-100	2.2	7
66	Image-based interface characterization with a restricted microscopic field of view. <i>International Journal of Solids and Structures</i> , 2018 , 132-133, 218-231	3.1	7
65	A practical approach for the separation of interfacial toughness and structural plasticity in a delamination growth experiment. <i>International Journal of Fracture</i> , 2013 , 183, 1-18	2.3	7
64	A Uni-Axial Nano-Displacement Micro-Tensile Test of Individual Constituents from Bulk Material. <i>Experimental Mechanics</i> , 2017 , 57, 1249-1263	2.6	7
63	An In Situ Experimental-Numerical Approach for Characterization and Prediction of Interface Delamination: Application to CuLF-MCE Systems. <i>Advanced Engineering Materials</i> , 2012 , 14, 1034-1041	3.5	7
62	On a Proper Account of First- and Second-Order Size Effects in Crystal Plasticity. <i>Advanced Engineering Materials</i> , 2009 , 11, 143-147	3.5	7
61	Material properties and growth process of microcrystalline silicon with growth rates in excess of 1 nm/s. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 664, 421		7
60	Simulation of interlaminar damage in mixed-mode bending tests using large deformation self-adaptive cohesive zones. <i>Engineering Fracture Mechanics</i> , 2013 , 109, 387-402	4.2	6
59	Enhanced Global Digital Image Correlation for Accurate Measurement of Microbeam Bending. <i>Advanced Structured Materials</i> , 2013 , 43-51	0.6	6
58	Micron-scale experimental-numerical characterization of metal-polymer interface delamination in stretchable electronics interconnects. <i>International Journal of Solids and Structures</i> , 2020 , 204-205, 52-64	3.1	6

57	Revisiting the martensite/ferrite interface damage initiation mechanism: The key role of substructure boundary sliding. <i>Acta Materialia</i> , 2021 , 205, 116533	8.4	6
56	Experimental full-field analysis of size effects in miniaturized cellular elastomeric metamaterials. <i>Materials and Design</i> , 2020 , 193, 108684	8.1	5
55	Three mechanisms of hydrogen-induced dislocation pinning in tungsten. <i>Nuclear Fusion</i> , 2020 , 60, 086015	3.3	5
54	Robust and precise identification of the hygro-expansion of single fibers: a full-field fiber topography correlation approach. <i>Cellulose</i> , 2020 , 27, 6777-6792	5.5	5
53	On the underlying micromechanisms in time-dependent anelasticity in Al-(1wt%)Cu thin films. <i>Acta Materialia</i> , 2017 , 124, 47-58	8.4	5
52	Recrystallization-mediated crack initiation in tungsten under simultaneous high-flux hydrogen plasma loads and high-cycle transient heating. <i>Nuclear Fusion</i> , 2021 , 61, 046018	3.3	5
51	Systematic and objective identification of the microstructure around damage directly from images. <i>Scripta Materialia</i> , 2016 , 113, 101-105	5.6	4
50	From Fibrils to Toughness: Multi-Scale Mechanics of Fibrillating Interfaces in Stretchable Electronics. <i>Materials</i> , 2018 , 11,	3.5	4
49	A Small-Scale, Contactless, Pure Bending Device for In-situ Testing. <i>Experimental Mechanics</i> , 2015 , 55, 1511-1524	2.6	4
48	Brittle Fracture-Based Experimental Methodology for Microstructure Analysis. <i>Applied Mechanics and Materials</i> , 2008 , 13-14, 133-139	0.3	4
47	New ultrahigh vacuum setup and advanced diagnostic techniques for studying a-Si:H film growth by radical beams. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 808, 491		4
46	Plasma-surface interaction and surface diffusion during silicon-based thin-film growth. <i>IEEE Transactions on Plasma Science</i> , 2005 , 33, 234-235	1.3	4
45	Anomalous precipitation hardening in Al-(1 wt%)Cu thin films. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 722, 37-46	5.3	3
44	A Platform for Mechano-(Electrical) Characterization of Free-Standing Micron-Sized Structures and Interconnects. <i>Micromachines</i> , 2018 , 9,	3.3	3
43	Experimental-Numerical Analysis of the Indentation-Based Damage Characterization Methodology. <i>Applied Mechanics and Materials</i> , 2008 , 13-14, 151-160	0.3	3
42	The a-Si:H Growth Mechanism: Temperature Study of the SiH ₃ Surface Reactivity and the Surface Silicon Hydride Composition During Film Growth. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 762, 931		3
41	Plasticity, localization, and damage in ferritic-pearlitic steel studied by nanoscale digital image correlation. <i>Scripta Materialia</i> , 2022 , 208, 114327	5.6	3
40	Cool, Dry, Nano-scale DIC Patterning of Delicate, Heterogeneous, Non-planar Specimens by Micro-mist Nebulization. <i>Experimental Mechanics</i> , 2021 , 61, 917-937	2.6	3

39	A Multi-loading, Climate-Controlled, Stationary ROI Device for In-Situ X-ray CT Hygro-Thermo-Mechanical Testing. <i>Experimental Mechanics</i> , 2019 , 59, 295-308	2.6	3
38	Mechanical Shape Correlation: A novel integrated digital image correlation approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 345, 983-1006	5.7	3
37	Interlaboratory Study of Digital Volume Correlation Error Due to X-Ray Computed Tomography Equipment and Scan Parameters: an Update from the DVC Challenge. <i>Experimental Mechanics</i> , 2021 , 61, 395-410	2.6	3
36	Mechanical Shape Correlation: A Novel Integrated Digital Image Correlation Approach. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2018 , 47-54	0.3	3
35	A Micropillar Compression Methodology for Ductile Damage Quantification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 796-801	2.3	2
34	Electron Micrographic Digital Image Correlation: Method Optimization and Microstructural banding Case Study. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 71-77	0.3	2
33	First-Order Size Effects in the Mechanics of Miniaturized Components. <i>Applied Mechanics and Materials</i> , 2008 , 13-14, 183-192	0.3	2
32	Laser-induced toughening inhibits cut-edge failure in multi-phase steel. <i>Scripta Materialia</i> , 2020 , 177, 79-85	5.6	2
31	An In-Situ, Micro-Mechanical Setup with Accurate, Tri-Axial, Piezoelectric Force Sensing and Positioning. <i>Experimental Mechanics</i> , 2020 , 60, 713-725	2.6	1
30	Multi-axial electro-mechanical testing methodology for highly stretchable freestanding micron-sized structures. <i>Journal of Micromechanics and Microengineering</i> , 2020 , 30, 055002	2	1
29	Full-field identification of mixed-mode adhesion properties in a flexible, multi-layer microelectronic material system. <i>Engineering Fracture Mechanics</i> , 2020 , 226, 106879	4.2	1
28	Boundary Mechanics in Lath Martensite, Studied by Uni-Axial Micro-Tensile Tests. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017 , 21-25	0.3	1
27	Self-adaptive Isogeometric Global Digital Image Correlation and Digital Height Correlation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017 , 165-172	0.3	1
26	An in-situ experimental-numerical approach for interface delamination characterization. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011 , 569-576	0.3	1
25	Full-field hygro-expansion characterization of single softwood and hardwood pulp fibers. <i>Nordic Pulp and Paper Research Journal</i> , 2021 , 36, 61-74	1.1	1
24	Parameter identification of micron-sized freestanding stretchable electronic interconnects using integrated digital height correlation. <i>Measurement Science and Technology</i> , 2021 , 32, 064001	2	1
23	A discrete slip plane model for simulating heterogeneous plastic deformation in single crystals. <i>International Journal of Solids and Structures</i> , 2021 , 228, 111094	3.1	1
22	Interface Integrity in Stretchable Electronics. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011 , 577-585	0.3	1

21	Power deposition behavior of high-density transient hydrogen plasma on tungsten in Magnum-PSI. <i>Plasma Physics and Controlled Fusion</i> , 2021 , 63, 085016	2	0
20	A Generic, Time-Resolved, Integrated Digital Image Correlation, Identification Approach. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2015 , 257-263	0.3	
19	Anelasticity in Al-Alloy Thin Films: A Micro-mechanical Analysis. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2015 , 107-112	0.3	
18	Omnidirectional stretchability of freestanding interconnects for stretchable electronics. <i>Smart Materials and Structures</i> , 2020 , 29, 045019	3.4	
17	Crystal Plasticity Parameter Identification by Integrated DIC on Microscopic Topographies. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2018 , 47-49	0.3	
16	Full-Field Identification Methods: Comparison of FEM Updating and Integrated DIC. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017 , 191-197	0.3	
15	Studies into the Growth Mechanism of a-Si:H Using in situ Cavity Ring-Down Techniques 237-271		
14	High-rate a-Si:H and β -Si:H Film Growth Studied by Advanced Plasma and in situ Film Diagnostics. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 715, 2561		
13	Novel in situ and real-time optical probes to detect (surface) defect states of a-Si:H. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 862, 1431		
12	A continuum consistent discrete particle method for continuum-discontinuum transitions and complex fracture problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022 , 390, 114460	5.7	
11	Advances in Delamination Modeling of Metal/Polymer Systems: Continuum Aspects 2018 , 83-128		
10	A Statistical/Computational/Experimental Approach to Study the Microstructural Morphology of Damage. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 61-65	0.3	
9	Full-Field Identification of Interfaces in Microelectronic Devices. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017 , 9-13	0.3	
8	Novel Image Correlation Based Techniques for Mechanical Analysis of MEMS. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2018 , 19-28	0.3	
7	Creep measurements in free-standing thin metal film micro-cantilever bending. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011 , 167-171	0.3	
6	A miniaturized contactless pure-bending device for in-situ SEM failure analysis. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011 , 587-596	0.3	
5	Global Digital Image Correlation for Pressure Deflected Membranes. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 135-140	0.3	
4	Micromechanical Characterization of Ductile Damage in DP Steel. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 29-35	0.3	

- 3 Integrated Global Digital Image Correlation for Interface Delamination Characterization. *Conference Proceedings of the Society for Experimental Mechanics*, **2014**, 27-32 0.3
- 2 On the Boundary Conditions and Optimization Methods in Integrated Digital Image Correlation. *Conference Proceedings of the Society for Experimental Mechanics*, **2018**, 55-61 0.3
- 1 Accurate Strain Field Measurement During Strip Rolling by Exploiting Recurring Material Motion with Time-Integrated Digital Image Correlation. *Experimental Mechanics*, **2022**, 62, 603-625 2.6