Gunnar A Niklasson

List of Publications by Citations

394 papers	13,915 citations	57 h-index	101 g-index
411 ext. papers	15,244 ext. citations	3.9 avg, IF	6.76 L-index

#	Paper	IF	Citations
394	Electrochromics for smart windows: thin films of tungsten oxide and nickel oxide, and devices based on these. *Journal of Materials Chemistry*, **2007**, 17, 127-156		1037
393	Effective medium models for the optical properties of inhomogeneous materials. *Applied Optics*, **1981**, 20, 26-30	1.7	451
392	Optical properties and solar selectivity of coevaporated Co-Al2O3 composite films. *Journal of Applied Physics*, **1984**, 55, 3382-3410	2.5	372
391	Eliminating degradation and uncovering ion-trapping dynamics in electrochromic WO3 thin films. *Nature Materials*, **2015**, 14, 996-1001	27	320
390	Recent advances in electrochromics for smart windows applications. *Solar Energy*, **1998**, 63, 199-216	6.8	247
389	Direct observation of active catalyst surface phases and the effect of dynamic self-optimization in NiFe-layered double hydroxides for alkaline water splitting. *Energy and Environmental Science*, **2019**, 12, 572-581	35.4	240
388	Electrochromic materials and devices for energy efficiency and human comfort in buildings: A critical review. *Electrochimica Acta*, **2018**, 259, 1170-1182	6.7	230
387	Optical band-gap determination of nanostructured WO3 film. *Applied Physics Letters*, **2010**, 96, 061909	3.4	227
386	Progress in chromogenics: New results for electrochromic and thermochromic materials and devices. *Solar Energy Materials and Solar Cells*, **2009**, 93, 2032-2039	6.4	219
385	Thermochromic VO2 films for energy-efficient windows. *Solar Energy Materials and Solar Cells*, **1987**, 16, 347-363		212
384	Thermochromic fenestration with VO2-based materials: Three challenges and how they can be met. *Thin Solid Films*, **2012**, 520, 3823-3828	2.2	211
383	Mg doping of thermochromic VO2 films enhances the optical transmittance and decreases the metal-insulator transition temperature. *Applied Physics Letters*, **2009**, 95, 171909	3.4	209
382	Thermochromic multilayer films of VO2 and TiO2 with enhanced transmittance. *Solar Energy Materials and Solar Cells*, **2009**, 93, 1685-1687	6.4	200
381	Nanothermochromics: Calculations for VO2 nanoparticles in dielectric hosts show much improved luminous transmittance and solar energy transmittance modulation. *Journal of Applied Physics*, **2010**, 108, 063525	2.5	181
380	Lognormal Size Distributions in Particle Growth Processes without Coagulation. *Physical Review Letters*, **1998**, 80, 2386-2388	7.4	172
379	Applicability conditions of the Kubelka-Munk theory. *Applied Optics*, **1997**, 36, 5580-6	1.7	169
378	New approach to the origin of lognormal size distributions of nanoparticles. *Nanotechnology*, **1999**, 10, 25-28	3.4	160

377	Advances in chromogenic materials and devices. *Thin Solid Films*, **2010**, 518, 3046-3053	2.2	158
376	Electrical and optical properties of thin films consisting of tin-doped indium oxide nanoparticles. *Physical Review B*, **2003**, 68,	3.3	158
375	Electrochromic materials and devices: Brief survey and new data on optical absorption in tungsten oxide and nickel oxide films. *Thin Solid Films*, **2006**, 496, 30-36	2.2	151
374	Radiative cooling during the day: simulations and experiments on pigmented polyethylene cover foils. *Solar Energy Materials and Solar Cells*, **1995**, 37, 93-118	6.4	146
373	Thermochromic VO2-based multilayer films with enhanced luminous transmittance and solar modulation. *Physica Status Solidi (A) Applications and Materials Science*, **2009**, 206, 2155-2160	1.6	136
372	Fractal aspects of the dielectric response of charge carriers in disordered materials. *Journal of Applied Physics*, **1987**, 62, R1-R14	2.5	131
371	Noble-metal-based transparent infrared reflectors: Experiments and theoretical analyses for very thin gold films. *Journal of Applied Physics*, **1986**, 59, 571-581	2.5	112
370	Infrared optical properties of evaporated alumina films. *Applied Optics*, **1981**, 20, 2742-6	1.7	112
369	Indium tin oxide films made from nanoparticles: models for the optical and electrical properties. *Thin Solid Films*, **2003**, 445, 199-206	2.2	106
368	Thickness dependence of the optical properties of sputter deposited Ti oxide films. *Thin Solid Films*, **2000**, 365, 119-125	2.2	106
367	Surfaces for selective absorption of solar energy: an annotated bibliography 1955–1981. *Journal of Materials Science*, **1983**, 18, 3475-3534	4.3	106
366	Electrochromism in nickel oxide films containing Mg, Al, Si, V, Zr, Nb, Ag, or Ta. *Solar Energy Materials and Solar Cells*, **2004**, 84, 337-350	6.4	100
365	A solar reflecting material for radiative cooling applications: ZnS pigmented polyethylene. *Solar Energy Materials and Solar Cells*, **1992**, 28, 175-193	6.4	100
364	A frequency response and transient current study of Ta2O5: Methods of estimating the dielectric constant, direct current conductivity, and ion mobility. *Journal of Applied Physics*, **1999**, 85, 2185-2191	2.5	99
363	Characterization and optical properties of arrays of small gold particles. *Applied Physics Letters*, **1984**, 44, 1134-1136	3.4	89
362	Nanothermochromics with VO2-based core-shell structures: Calculated luminous and solar optical properties. *Journal of Applied Physics*, **2011**, 109, 113515	2.5	83
361	Anodic Electrochromism for Energy-Efficient Windows: Cation/Anion-Based Surface Processes and Effects of Crystal Facets in Nickel Oxide Thin Films. *Advanced Functional Materials*, **2015**, 25, 3359-3370	15.6	81
360	Flexible foils with electrochromic coatings: science, technology and applications. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2005**, 119, 214-223	3.1	80

359	Oxidation Kinetics of Nickel Particles: Comparison Between Free Particles and Particles in an Oxide Matrix. *Solar Energy*, **2000**, 68, 329-333	6.8	80
358	Unveiling the complex electronic structure of amorphous metal oxides. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 6355-6360	11.5	79
357	Electrochromic tungsten oxide: the role of defects. *Solar Energy Materials and Solar Cells*, **2004**, 84, 315-328	6.4	79
356	Voltammetry on fractals. *Solid State Communications*, **1995**, 96, 151-154	1.6	79
355	Electrochromism in nickel oxide and tungsten oxide thin films: Ion intercalation from different electrolytes. *Solar Energy Materials and Solar Cells*, **2009**, 93, 2050-2055	6.4	77
354	Spectroscopic ellipsometry characterization of electrochromic tungsten oxide and nickel oxide thin films made by sputter deposition. *Solar Energy Materials and Solar Cells*, **2010**, 94, 724-732	6.4	77
353	Angular selective window coatings: theory and experiments. *Journal Physics D: Applied Physics*, **1997**, 30, 2103-2122	3	72
352	Circuit models for cement based materials obtained from impedance spectroscopy. *Cement and Concrete Research*, **1991**, 21, 496-508	10.3	72
351	Optical absorption in lithiated tungsten oxide thin films: Experiment and theory. *Journal of Applied Physics*, **2007**, 102, 083538	2.5	70
350	Optical properties of gas-evaporated metal particles: Effects of a fractal structure. *Journal of Applied Physics*, **1987**, 62, 258-265	2.5	70
349	Electrochromism in sputter-deposited W□i oxide films: Durability enhancement due to Ti. *Solar Energy Materials and Solar Cells*, **2014**, 125, 184-189	6.4	69
348	Galvanostatic Ion Detrapping Rejuvenates Oxide Thin Films. *ACS Applied Materials & Interfaces*, **2015**, 7, 26387-90	9.5	68
347	Polaron absorption in amorphous tungsten oxide films. *Journal of Applied Physics*, **2001**, 90, 1860-1863	2.5	67
346	Optical properties of nanocrystalline WO3 and WO3-x thin films prepared by DC magnetron sputtering. *Journal of Applied Physics*, **2014**, 115, 213510	2.5	65
345	Bandgap widening in thermochromic Mg-doped VO2 thin films: Quantitative data based on optical absorption. *Applied Physics Letters*, **2013**, 103, 161907	3.4	65
344	Electrochromism in sputter deposited nickel-containing tungsten oxide films. *Solar Energy Materials and Solar Cells*, **2012**, 99, 339-344	6.4	64
343	Low-temperature synthesis of thermochromic vanadium dioxide thin films by reactive high power impulse magnetron sputtering. *Solar Energy Materials and Solar Cells*, **2016**, 149, 137-144	6.4	61
342	Fractal dimension of gas-evaporated Co aggregates: Role of magnetic coupling. *Physical Review Letters*, **1988**, 60, 1735-1738	7.4	61

341	Durability of thermochromic VO2 thin films under heating and humidity: Effect of Al oxide top coatings. *Thin Solid Films*, **2014**, 562, 568-573	2.2	59
340	TiO2/Au/TiO2 multilayer thin films: Novel metal-based transparent conductors for electrochromic devices. *Thin Solid Films*, **2009**, 518, 1225-1229	2.2	59
339	Optical properties of nano-structured dye-sensitized solar cells. *Solar Energy Materials and Solar Cells*, **2001**, 69, 147-163	6.4	59
338	Optical properties of Mg-doped VO2: Absorption measurements and hybrid functional calculations. *Applied Physics Letters*, **2012**, 101, 201902	3.4	58
337	Sustainable Rejuvenation of Electrochromic WO3 Films. *ACS Applied Materials & Interfaces*, **2015**, 7, 28100-4	9.5	55
336	Nanoparticles of TiO 2 and VO 2 in dielectric media: Conditions for low optical scattering, and comparison between effective medium and four-flux theories. *Solar Energy Materials and Solar Cells* , **2014**, 130, 132-137	6.4	54
335	Structure and composition of sputter-deposited nickel-tungsten oxide films. *Thin Solid Films*, **2011**, 519, 2062-2066	2.2	54
334	Determination of fractal dimension by cyclic I-V studies: The Laplace-transform method. *Physical Review B*, **1995**, 52, 14192-14197	3.3	52
333	Condensation of water by radiative cooling. *Renewable Energy*, **1994**, 5, 310-317	8.1	51
332	Electrochromic nickel oxide films and their compatibility with potassium hydroxide and lithium perchlorate in propylene carbonate: Optical, electrochemical and stress-related properties. *Thin Solid Films*, **2014**, 565, 128-135	2.2	50
331	Toward a quantitative model for suspended particle devices: Optical scattering and absorption coefficients. *Solar Energy Materials and Solar Cells*, **2013**, 111, 115-122	6.4	49
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329	Electrochromics: Fundamentals and energy-related applications of oxide-based devices. *Applied Physics A: Materials Science and Processing*, **2007**, 89, 29-35	2.6	48
328	Proton Diffusion and Electrochromism in Hydrated NiO[sub y] and Ni[sub 1−]V[sub x]O[sub y] Thin Films. *Journal of the Electrochemical Society*, **2005**, 152, F203	3.9	48
327	Angular-selective optical properties of Cr films made by oblique-angle evaporation. *Applied Physics Letters*, **1989**, 54, 987-989	3.4	48
326	Electrochromics on a roll: Web-coating and lamination for smart windows. *Surface and Coatings Technology*, **2018**, 336, 133-138	4.4	48
325	Electrochemical characterization of TiO2 blocking layers prepared by reactive DC magnetron sputtering. *Journal of Electroanalytical Chemistry*, **2009**, 637, 79-83	4.1	47
324	Coloration Mechanism in Proton-Intercalated Electrochromic Hydrated NiO[sub y] and Ni[sub 1−]V[sub x]O[sub y] Thin Films. *Journal of the Electrochemical Society*, **2009**, 156, P132	3.9	47

323	Small polaron formation in porous WO3 nanoparticle films. *Journal of Applied Physics*, **2004**, 96, 5722-5726	2.5	47
322	Oxidation kinetics of nickel nanoparticles. *Journal of Applied Physics*, **2001**, 89, 3012-3017	2.5	46
321	Strongly improved electrochemical cycling durability by adding iridium to electrochromic nickel oxide films. *ACS Applied Materials & Interfaces*, **2015**, 7, 9319-22	9.5	45
320	Electrochromism and small-polaron hopping in oxygen deficient and lithium intercalated amorphous tungsten oxide films. *Journal of Applied Physics*, **2015**, 118, 024901	2.5	44
319	The real origin of lognormal size distributions of nanoparticles in vapor growth processes. *Scripta Materialia*, **1999**, 12, 327-332		44
318	Angular-selective optical transmittance of anisotropic inhomogeneous Cr-based films made by sputtering. *Journal of Applied Physics*, **1995**, 77, 6145-6151	2.5	44
317	Optical properties at the metal-insulator transition in thermochromic VO2 Fx thin films. *Journal of Applied Physics*, **1988**, 64, 3327-3329	2.5	44
316	Ultrafine chromium particles for photothermal conversion of solar energy. *Journal of Applied Physics*, **1978**, 49, 3512-3520	2.5	44
315	Electrochemical Rejuvenation of Anodically Coloring Electrochromic Nickel Oxide Thin Films. *ACS Applied Materials & Interfaces*, **2017**, 9, 42420-42424	9.5	43
314	Electrical properties of ZrO2 thin films. *Thin Solid Films*, **2002**, 402, 242-247	2.2	42
313	Isothermal transient ionic current as a characterization technique for ion transport in Ta2O5. *Journal of Applied Physics*, **1999**, 85, 8199-8204	2.5	42
312	Comparison of dielectric response functions for conducting materials. *Journal of Applied Physics*, **1989**, 66, 4350-4359	2.5	42
311	Thermochromic undoped and Mg-doped VO2 thin films and nanoparticles: Optical properties and performance limits for energy efficient windows. *Journal of Applied Physics*, **2014**, 115, 053513	2.5	41
310	Thin porous indium tin oxide nanoparticle films: effects of annealing in vacuum and air. *Applied Physics A: Materials Science and Processing*, **2005**, 81, 1363-1368	2.6	41
309	Oxidation kinetics of small nickel particles. *Journal of Applied Physics*, **1999**, 85, 1186-1191	2.5	41
308	Dielectric properties of cement mortar as a function of water content. *Journal of Applied Physics*, **1992**, 71, 5897-5903	2.5	41
307	Optical response and fabrication of regular arrays of ultrasmall gold particles. *Thin Solid Films*, **1985** , 125, 165-170	2.2	41
306	Degradation Dynamics for Electrochromic WO Films under Extended Charge Insertion and Extraction: Unveiling Physicochemical Mechanisms. *ACS Applied Materials & Interfaces*, **2017**, 9, 12872-12877	9.5	40

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302	Eliminating Electrochromic Degradation in Amorphous TiO2 through Li-Ion Detrapping. *ACS Applied Materials & Interfaces*, **2016**, 8, 5777-82	9.5	39
301	Electrochromism of DC magnetron sputtered TiO2 thin films: Role of deposition parameters. *Solar Energy Materials and Solar Cells*, **2013**, 115, 172-180	6.4	39
300	Infrared emittance modulation of all-thin-film electrochromic devices. *Materials Letters*, **2004**, 58, 2517-2520	3.3	39
299	Infrared-optical properties of gas-evaporated gold blacks: Evidence for anomalous conduction on fractal structures. *Physical Review Letters*, **1986**, 56, 256-258	7.4	39
298	Electrochromic W1□□TixMoyO3 Thin Films Made by Sputter Deposition: Large Optical Modulation, Good Cycling Durability, and Approximate Color Neutrality. *Chemistry of Materials*, **2017**, 29, 2246-2253	9.6	38
297	Electrochromic WO thin films attain unprecedented durability by potentiostatic pretreatment. *Journal of Materials Chemistry A*, **2019**, 7, 2908-2918	13	37
296	Simulation of the thickness dependence of the optical properties of suspended particle devices. *Solar Energy Materials and Solar Cells*, **2015**, 143, 613-622	6.4	37
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293	Optical properties of electrochromic all-solid-state devices. *Solar Energy Materials and Solar Cells*, **2004**, 84, 351-360	6.4	37
292	Optical properties of sputter deposited transparent and conducting TiO2:Nb films. *Thin Solid Films*, **2009**, 518, 1254-1258	2.2	36
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288	Spectroscopic study of the photofixation of SO2 on anatase TiO2 thin films and their oleophobic properties. *ACS Applied Materials & Interfaces*, **2012**, 4, 672-9	9.5	35

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285	Electronic and optical properties of nanocrystalline WO□ thin films studied by optical spectroscopy and density functional calculations. *Journal of Physics Condensed Matter*, **2013**, 25, 205502	1.8	34
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281	Diffuse reflectance of TiO2 pigmented paints: Spectral dependence of the average pathlength parameter and the forward scattering ratio. *Optics Communications*, **2006**, 261, 71-78	2	33
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279	Li intercalation in transparent Ti□e oxide films: Energetics and ion dynamics. *Journal of Applied Physics*, **1997**, 81, 6432-6437	2.5	32
278	Obliquely evaporated Cr films with large angular selectivity. *Journal of Applied Physics*, **1995**, 77, 2816-2818	2.5	32
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265	Plasmon-induced near-infrared electrochromism based on transparent conducting nanoparticles: Approximate performance limits. *Applied Physics Letters*, **2012**, 101, 071903	3.4	27
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263	Electrochromic properties of nickel oxide based thin films sputter deposited in the presence of water vapor. *Thin Solid Films*, **2012**, 520, 3839-3842	2.2	26
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