Andreas Mandelis

List of Publications by Year in Descending Order

388 papers	6,432 citations	39 h-index	60 g-index
660 ext. papers	7,057 ext. citations	2.6 avg, IF	6.17 L-index

#	Paper	IF	Citations
388	Review of Scientific Instruments New Products.. *Review of Scientific Instruments*, **2022**, 93, 019501	1.7	
387	Design and structural optimization of T-resonators for highly sensitive photoacoustic trace gas detection. *Optics and Laser Technology*, **2022**, 148, 107695	4.2	10
386	Non-destructive lock-in thermography of green powder metallurgy component inhomogeneities: A predictive imaging method for manufactured component flaw prevention. *NDT and E International*, **2022**, 127, 102603	4.1	1
385	Review of Scientific Instruments New Products.. *Review of Scientific Instruments*, **2022**, 93, 029501	1.7	
384	Comparative analysis of single- and multiple-frequency thermal wave radar imaging inspection of glass fiber reinforced polymer (GFRP). *International Journal of Extreme Manufacturing*, **2022**, 4, 025201	7.9	1
383	Three-Dimensional Thermophotonic Image Optimization Modalities of Truncated Correlation Photothermal Coherence Tomography.. *Journal of Biophotonics*, **2022**, e202200018	3.1	0
382	Review of Scientific Instruments New Products.. *Review of Scientific Instruments*, **2022**, 93, 049501	1.7	
381	Review of Scientific Instruments New Products.. *Review of Scientific Instruments*, **2022**, 93, 049502	1.7	
380	Photoacoustic Simultaneous Detection of multiple trace gases for industrial park application. *Wuli Xuebao/Acta Physica Sinica*, **2022**,	0.6	
379	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2022**, 93, 059501	1.7	
378	Infrared computer vision in non-destructive imaging: Sharp delineation of subsurface defect boundaries in enhanced truncated correlation photothermal coherence tomography images using K-means clustering. *NDT and E International*, **2021**, 125, 102568	4.1	4
377	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 119502	1.7	
376	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 119503	1.7	
375	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 039501	1.7	
374	Highly sensitive broadband differential infrared photoacoustic spectroscopy with wavelet denoising algorithm for trace gas detection. *Photoacoustics*, **2021**, 21, 100228	9	23
373	Advanced characterization methods of carrier transport in quantum dot photovoltaic solar cells. *Journal of Applied Physics*, **2021**, 129, 091101	2.5	4
372	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 049501	1.7	

371	Detection and monitoring of early dental caries and erosion using three-dimensional enhanced truncated-correlation photothermal coherence tomography imaging. *Journal of Biomedical Optics*, **2021**, 26,	3.5	1
370	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 059501	1.7	
369	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 069502	1.7	
368	Quantitative Imaging of Defect Distributions in CdZnTe Wafers Using Combined Deep-Level Photothermal Spectroscopy, Photocarrier Radiometry, and Lock-In Carrierography. *ACS Applied Electronic Materials*, **2021**, 3, 2551-2563	4	5
367	Laser induced thermoelastic contributions from windows to signal background in a photoacoustic cell. *Photoacoustics*, **2021**, 22, 100257	9	7
366	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 079502	1.7	
365	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 029501	1.7	
364	Fully nonlinear photocarrier radiometry / modulated photoluminescence dynamics in semiconductors: Theory and applications to quantitative deconvolution of multiplexed photocarrier density wave interference and recombination processes. *Journal of Luminescence*, **2021**, 236, 118075	3.8	4
363	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 089502	1.7	
362	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 099502	1.7	
361	Non-Local Patch Regression Algorithm-Enhanced Differential Photoacoustic Methodology for Highly Sensitive Trace Gas Detection. *Chemosensors*, **2021**, 9, 268	4	2
360	Truncated correlation photoacoustic coherence tomography: An axial resolution enhancement imaging modality. *Photoacoustics*, **2021**, 23, 100277	9	1
359	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2021**, 92, 019502	1.7	
358	Carrier-Density-Wave Multiple Lifetime Imaging in a Multicrystalline Silicon Solar Cell Using Quantitative Heterodyne Lock-In Carrierography and Localized Current–Voltage Characteristics. *IEEE Journal of Photovoltaics*, **2021**, 1-12	3.7	1
357	A Microwave-Thermography Hybrid Technique for Breast Cancer Detection. *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, **2021**, 1-1	2.8	3
356	Review of Scientific Instruments New Products.. *Review of Scientific Instruments*, **2021**, 92, 129501	1.7	
355	Non-destructive imaging of ancient marquetries using active thermography and photothermal coherence tomography. *Journal of Cultural Heritage*, **2020**, 46, 159-164	2.9	3
354	Quantitative photothermal lock-in thermography imaging of curved surfaces of cylindrical solids. *Journal of Applied Physics*, **2020**, 127, 195101	2.5	0

353	Mechanical Strength Evaluation of Elastic Materials by Multiphysical Nondestructive Methods: A Review. *Applied Sciences (Switzerland)*, **2020**, 10, 1588	2.6	5
352	Quantitative non-destructive single-frequency thermal-wave-radar imaging of case depths in hardened steels. *Journal of Applied Physics*, **2020**, 127, 245102	2.5	2
351	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 069501	1.7	
350	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 059502	1.7	
349	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 015111	1.7	
348	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 029501	1.7	
347	Surface recombination velocity on wet-cleaned silicon wafers using heterodyne lock-in ca rrierography imaging: measurement uniqueness investigation. *Semiconductor Science and Technology*, **2020**, 35, 055013	1.8	4
346	Determination of thermophysical properties and density volume fractions of Al2O3/Y-ZrO2 layered composite materials using transient thermography and two-stage inverse nonlinear heat conduction analysis. *Journal of Applied Physics*, **2020**, 127, 045110	2.5	1
345	Photopyroelectric Spectroscopy of Pure Fluids and Liquid Mixtures: Foundations and State-of-the-Art Applications. *International Journal of Thermophysics*, **2020**, 41, 1	2.1	3
344	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 119501	1.7	
343	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 129501	1.7	
342	An optoelectronic notch (□ip)□phenomenon in the heterodyne photocarrier radiometry frequency response of Si wafers: a route to quantitative trap-state dynamic processes in semiconductors. *Semiconductor Science and Technology*, **2020**, 35, 115024	1.8	4
341	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 099501	1.7	
340	Lock-in carrierography non-destructive imaging of silicon wafers and silicon solar cells. *Journal of Applied Physics*, **2020**, 128, 180903	2.5	7
339	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 079502	1.7	
338	Non-invasive in-vivo 3-D imaging of small animals using spatially filtered enhanced truncated-correlation photothermal coherence tomography. *Scientific Reports*, **2020**, 10, 13743	4.9	2
337	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 039501	1.7	
336	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 109502	1.7	

335	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 049501	1.7	
334	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2020**, 91, 089501	1.7	
333	Fourier-Laplace Spectral Theory for Non-Steady-State Thermal Fields with Applications to Problems in Steady-State Photothermal Linear Frequency Modulation. *Physical Review Applied*, **2020**, 14,	4.3	4
332	Interference-free Detection of Lipid-laden Atherosclerotic Plaques by 3D Co-registration of Frequency-Domain Differential Photoacoustic and Ultrasound Radar Imaging. *Scientific Reports*, **2019**, 9, 12400	4.9	3
331	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 089501	1.7	
330	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 019501	1.7	
329	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 059501	1.7	
328	Waveform engineering analysis of photoacoustic radar chirp parameters for spatial resolution and SNR optimization. *Photoacoustics*, **2019**, 14, 49-66	9	2
327	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 049501	1.7	
326	Controlled Steric Hindrance Enables Efficient Ligand Exchange for Stable, Infrared-Bandgap Quantum Dot Inks. *ACS Energy Letters*, **2019**, 4, 1225-1230	20.1	30
325	Noninvasive in vivo glucose detection in human finger interstitial fluid using wavelength-modulated differential photothermal radiometry. *Journal of Biophotonics*, **2019**, 12, e201800441	3.1	4
324	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 029501	1.7	
323	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 039501	1.7	
322	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 079501	1.7	
321	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 069501	1.7	
320	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 099501	1.7	
319	Frequency-domain differential photoacoustic radar: theory and validation for ultrasensitive atherosclerotic plaque imaging. *Journal of Biomedical Optics*, **2019**, 24, 1-12	3.5	4
318	Review of the state of the art in cardiovascular endoscopy imaging of atherosclerosis using photoacoustic techniques with pulsed and continuous-wave optical excitations. *Journal of Biomedical Optics*, **2019**, 24, 1-15	3.5	11

317	Truncated-correlation photothermal coherence tomography derivative imaging modality for small animal in vivo early tumor detection. *Optics Letters*, **2019**, 44, 675-678	3	9
316	Uniqueness range optimization of photocarrier transport parameter measurements using combined quantitative heterodyne lock-in carrierography imaging and photocarrier radiometry. *Journal of Applied Physics*, **2019**, 125, 065701	2.5	7
315	3D Dental Subsurface Imaging Using Enhanced Truncated Correlation-Photothermal Coherence Tomography. *Scientific Reports*, **2019**, 9, 16788	4.9	6
314	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 109501	1.7	
313	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 129501	1.7	
312	Review of Scientific Instruments New Products. *Review of Scientific Instruments*, **2019**, 90, 119501	1.7	
311	Ultrahigh-Frequency Heterodyne Lock-In Carrierography for Large-Scale Quantitative Multi-Parameter Imaging of Colloidal Quantum Dot Solar Cells. *IEEE Journal of Photovoltaics*, **2019**, 9, 132-138	3.7	9
310	Application of linear frequency modulated laser ultrasonic radar in reflective thickness and defect non-destructive testing. *NDT and E International*, **2019**, 102, 84-89	4.1	9
309	Temperature- and Size-Dependent Exciton Dynamics in PbS Colloidal Quantum Dot Thin Films Using Combined Photoluminescence Spectroscopy and Photocarrier Radiometry. *Journal of Physical Chemistry C*, **2018**, 122, 5759-5766	3.8	7
308	Single frequency thermal wave radar: A next-generation dynamic thermography for quantitative non-destructive imaging over wide modulation frequency ranges. *Review of Scientific Instruments*, **2018**, 89, 044901	1.7	11
307	Surface recombination velocity imaging of wet-cleaned silicon wafers using quantitative heterodyne lock-in carrierography. *Applied Physics Letters*, **2018**, 112, 012105	3.4	17
306	Photothermal coherence tomography for 3-D visualization and structural non-destructive imaging of a wood inlay. *Infrared Physics and Technology*, **2018**, 91, 206-213	2.7	11
305	Characterization of the Mechanical Stress–Strain Performance of Aerospace Alloy Materials Using Frequency-Domain Photoacoustic Ultrasound and Photothermal Methods: An FEM Approach. *International Journal of Thermophysics*, **2018**, 39, 1	2.1	1
304	Simultaneous determination of effective carrier lifetime and resistivity of Si wafers using the nonlinear nature of photocarrier radiometric signals. *Journal Physics D: Applied Physics*, **2018**, 51, 15LT01	3	10
303	Colloidal quantum dot solar cell electrical parameter non-destructive quantitative imaging using high-frequency heterodyne lock-in carrierography and photocarrier radiometry. *Solar Energy Materials and Solar Cells*, **2018**, 174, 405-411	6.4	13
302	Fourier-Transform Infrared Differential Photoacoustic Spectroscopy (FTIR-DPAS) for Simultaneous Monitoring of Multiple Air Contaminants/Trace Gases. *International Journal of Thermophysics*, **2018**, 39, 1	2.1	4
301	Highly sensitive and specific noninvasive alcohol detection using wavelength-modulated differential photothermal radiometry. *Biomedical Optics Express*, **2018**, 9, 4638-4648	3.5	2
300	Quantitative lock-in thermography imaging of thermal-wave spatial profiles and thermophysical property measurements in solids with inner corner geometries using thermal-wave field theory. *Journal of Applied Physics*, **2018**, 124, 205106	2.5	2

299	Detection of Caries Around Resin-Modified Glass Ionomer and Compomer Restorations Using Four Different Modalities In Vitro. *Dentistry Journal*, **2018**, 6,	3.1	2
298	Contactless non-destructive imaging of doping density and electrical resistivity of semiconductor Si wafers using lock-in carrierography. *Semiconductor Science and Technology*, **2018**, 33, 12LT01	1.8	7
297	Perspective: Principles and specifications of photothermal imaging methodologies and their applications to non-invasive biomedical and non-destructive materials imaging. *Journal of Applied Physics*, **2018**, 124, 160903	2.5	11
296	Surface Recombination Velocity Imaging of HF-Etched Si Wafers Using Dynamic Heterodyne Lock-In Carrierography. *Solid State Phenomena*, **2018**, 282, 13-18	0.4	2
295	The application of frequency-domain photoacoustics to temperature-dependent measurements of the Grüneisen parameter in lipids. *Photoacoustics*, **2018**, 11, 56-64	9	11
294	Evaluation of mechanical performance of NiCo nanocoated aerospace aluminum alloy using quantitative photo-thermo-mechanical radiometry as a non-contact strain gauge. *NDT and E International*, **2017**, 87, 44-49	4.1	7
293	Temperature- and ligand-dependent carrier transport dynamics in photovoltaic PbS colloidal quantum dot thin films using diffusion-wave methods. *Solar Energy Materials and Solar Cells*, **2017**, 164, 135-145	6.4	18
292	Coded excitation waveform engineering for high frame rate synthetic aperture ultrasound imaging. *Ultrasonics*, **2017**, 77, 121-132	3.5	5
291	Imaging cancer with photoacoustic radar. *Physics Today*, **2017**, 70, 42-48	0.9	4
290	Photothermal radiometry parametric identifiability theory for reliable and unique nondestructive coating thickness and thermophysical measurements. *Journal of Applied Physics*, **2017**, 121, 095101	2.5	8
289	Non-destructive thermal-wave-radar imaging of manufactured green powder metallurgy compact flaws (cracks). *NDT and E International*, **2017**, 86, 140-152	4.1	9
288	Enhanced truncated-correlation photothermal coherence tomography with application to deep subsurface defect imaging and 3-dimensional reconstructions. *Journal of Applied Physics*, **2017**, 122, 023103	2.5	25
287	Response to "Comment on 'Photothermal radiometry parametric identifiability theory for reliable and unique nondestructive coating thickness and thermophysical measurements' [J. Appl. Phys. 122, 066101 (2017)]. *Journal of Applied Physics*, **2017**, 122, 066102	2.5	
286	Colloidal quantum dot solar cell power conversion efficiency optimization using analysis of current-voltage characteristics and electrode contact imaging by lock-in carrierography. *Progress in Photovoltaics: Research and Applications*, **2017**, 25, 1034-1050	6.8	12
285	Frequency-Domain Laser Ultrasound (FDLU) Non-destructive Evaluation of Stress–Strain Behavior in an Aluminum Alloy. *International Journal of Thermophysics*, **2017**, 38, 1	2.1	9
284	Local-stress-induced thermal conductivity anisotropy analysis using non-destructive photo-thermo-mechanical lock-in thermography (PTM-LIT) imaging. *NDT and E International*, **2017**, 91, 79-87	4.1	7
283	Study of Exciton Hopping Transport in PbS Colloidal Quantum Dot Thin Films Using Frequency- and Temperature-Scanned Photocarrier Radiometry. *International Journal of Thermophysics*, **2017**, 38, 1	2.1	6
282	Quantitative phase-filtered wavelength-modulated differential photoacoustic radar tumor hypoxia imaging toward early cancer detection. *Journal of Biophotonics*, **2017**, 10, 1134-1142	3.1	6

281	Multi-Centre Clinical Evaluation of Photothermal Radiometry and Luminescence Correlated with International Benchmarks for Caries Detection. *Open Dentistry Journal*, **2017**, 11, 636-647	0.8	9
280	Correlation with Caries Lesion Depth of The Canary System, DIAGNOdent and ICDAS II. *Open Dentistry Journal*, **2017**, 11, 679-689	0.8	18
279	Step-scan differential Fourier transform infrared photoacoustic spectroscopy (DFTIR-PAS): a spectral deconvolution method for weak absorber detection in the presence of strongly overlapping background absorptions. *Optics Letters*, **2017**, 42, 1424-1427	3	15
278	Step-scan T cell-based differential Fourier transform infrared photoacoustic spectroscopy (DFTIR-PAS) for detection of ambient air contaminants. *Applied Physics B: Lasers and Optics*, **2016**, 122, 1	1.9	14
277	Camera-based high frequency heterodyne lock-in carrierographic (frequency-domain photoluminescence) imaging of crystalline silicon wafers. *Physica Status Solidi (A) Applications and Materials Science*, **2016**, 213, 405-411	1.6	20
276	Step-Scan T-Cell Fourier Transform Infrared Photoacoustic Spectroscopy (FTIR-PAS) for Monitoring Environmental Air Pollutants. *International Journal of Thermophysics*, **2016**, 37, 1	2.1	11
275	SNR and Contrast Enhancement Techniques for the Photoacoustic Radar Imaging. *International Journal of Thermophysics*, **2016**, 37, 1	2.1	3
274	Imbalanced charge carrier mobility and Schottky junction induced anomalous current-voltage characteristics of excitonic PbS colloidal quantum dot solar cells. *Solar Energy Materials and Solar Cells*, **2016**, 155, 155-165	6.4	31
273	High-Frame-Rate Synthetic Aperture Ultrasound Imaging Using Mismatched Coded Excitation Waveform Engineering: A Feasibility Study. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2016**, 63, 828-41	3.2	8
272	Characterization of an intraluminal differential frequency-domain photoacoustics system **2016**,		2
271	Quantitative Analysis of Trap-State-Mediated Exciton Transport in Perovskite-Shelled PbS Quantum Dot Thin Films Using Photocarrier Diffusion-Wave Nondestructive Evaluation and Imaging. *Journal of Physical Chemistry C*, **2016**, 120, 14416-14427	3.8	22
270	Frequency-Domain Photoacoustic Phase Spectroscopy: A Fluence-Independent Approach for Quantitative Probing of Hemoglobin Oxygen Saturation. *IEEE Journal of Selected Topics in Quantum Electronics*, **2016**, 22, 127-136	3.8	11
269	Wavelength-modulated differential photoacoustic radar imager (WM-DPARI): accurate monitoring of absolute hemoglobin oxygen saturation. *Biomedical Optics Express*, **2016**, 7, 2586-96	3.5	13
268	Co-registered Frequency-Domain Photoacoustic Radar and Ultrasound System for Subsurface Imaging in Turbid Media. *International Journal of Thermophysics*, **2016**, 37, 1	2.1	3
267	Quantitative Carrier Density Wave Imaging in Silicon Solar Cells Using Photocarrier Radiometry and Lock-in Carrierography. *International Journal of Thermophysics*, **2016**, 37, 1	2.1	8
266	Trap State Effects in PbS Colloidal Quantum Dot Exciton Kinetics Using Photocarrier Radiometry Intensity and Temperature Measurements. *International Journal of Thermophysics*, **2016**, 37, 1	2.1	4
265	Step scan T-cell Fourier-transform infrared photoacoustic spectroscopy (FTIR-PAS) for detection of ambient air contaminants. *Vibrational Spectroscopy*, **2016**, 87, 94-98	2.1	11
264	Quantitative measurements of charge carrier hopping transport properties in depleted-heterojunction PbS colloidal quantum dot solar cells from temperature dependent current–voltage characteristics. *RSC Advances*, **2016**, 6, 93180-93194	3.7	13

263	Non-destructive and non-contacting stress–strain characterization of aerospace metallic alloys using photo-thermo-mechanical radiometry. *NDT and E International*, **2016**, 84, 47-53	4.1	8
262	Wavelength-Modulated Differential Photoacoustic Spectroscopy (WM-DPAS) for noninvasive early cancer detection and tissue hypoxia monitoring. *Journal of Biophotonics*, **2016**, 9, 388-95	3.1	14
261	Depth Profiling of Electronic Transport Properties in (mathrm{H}^{+})-Implanted n-Type Silicon. *International Journal of Thermophysics*, **2015**, 36, 967-972	2.1	1
260	Non-contact Determination of Local Efficiency of mc-Si Solar Cells Using Quantitative Lock-In Thermographic and Carrierographic (Photoluminescence) Imaging. *International Journal of Thermophysics*, **2015**, 36, 987-996	2.1	3
259	Optoelectronic transport properties in amorphous/crystalline silicon solar cell heterojunctions measured by frequency-domain photocarrier radiometry: multi-parameter measurement reliability and precision studies. *Review of Scientific Instruments*, **2015**, 86, 033901	1.7	16
258	Thermally Enhanced Photoacoustic Radar Imaging of Biotissues. *International Journal of Thermophysics*, **2015**, 36, 900-904	2.1	1
257	Variational Photocarrier Radiometry Reconstruction of Exciton Lifetime Spectra for a Coupled PbS Colloidal Quantum Dot Thin Film Under Combined AC and DC Laser Excitation. *International Journal of Thermophysics*, **2015**, 36, 1358-1365	2.1	2
256	Photoacoustic radar phase-filtered spatial resolution and co-registered ultrasound image enhancement for tumor detection. *Biomedical Optics Express*, **2015**, 6, 1003-9	3.5	10
255	Frequency-domain photothermoacoustic and ultrasonic imaging of blood and opto-thermal effects of plasmonic nanoparticle concentrations. *Journal of Biomedical Optics*, **2015**, 20, 76009	3.5	4
254	Simultaneous dual-wavelength photoacoustic radar imaging using waveform engineering with mismatched frequency modulated excitation. *Optics Letters*, **2015**, 40, 1145-8	3	22
253	Bone Composition Diagnostics: Photoacoustics Versus Ultrasound. *International Journal of Thermophysics*, **2015**, 36, 862-867	2.1	8
252	Comparative Study of Thermal-Wave Fields in Bi-layered Semi-cylindrical and Fully Cylindrical Solids. *International Journal of Thermophysics*, **2015**, 36, 1131-1136	2.1	
251	Camera-Based Lock-in and Heterodyne Carrierographic Photoluminescence Imaging of Crystalline Silicon Wafers. *International Journal of Thermophysics*, **2015**, 36, 1274-1280	2.1	8
250	An absolute calibration method of an ethyl alcohol biosensor based on wavelength-modulated differential photothermal radiometry. *Review of Scientific Instruments*, **2015**, 86, 115003	1.7	3
249	The Effect of Acoustic Impedance on Subsurface Absorber Geometry Reconstruction using 1D Frequency-Domain Photoacoustics. *Photoacoustics*, **2015**, 3, 132-142	9	15
248	Wavelength-Modulated Differential Photoacoustic Spectroscopy (WM-DPAS): Theory of a High-Sensitivity Methodology for the Detection of Early-Stage Tumors in Tissues. *International Journal of Thermophysics*, **2015**, 36, 1305-1311	2.1	9
247	Photoacoustic and ultrasound imaging of cancellous bone tissue. *Journal of Biomedical Optics*, **2015** , 20, 076016	3.5	6
246	UV Laser Photocarrier Radiometry of c-Silicon with Surface Thin Hydrogenated Amorphous Si Film. *International Journal of Thermophysics*, **2015**, 36, 1037-1044	2.1	

245	Combined Photoacoustic Ultrasound and Beam Deflection Signal Monitoring of Gold Nanoparticle Agglomerate Concentrations in Tissue Phantoms Using a Pulsed Nd:YAG Laser. *International Journal of Thermophysics*, **2015**, 36, 880-890	2.1	10
244	The application of backscattered ultrasound and photoacoustic signals for assessment of bone collagen and mineral contents. *Quantitative Imaging in Medicine and Surgery*, **2015**, 5, 46-56	3.6	18
243	Variational Reconstruction of Exciton Multipath Deexcitation Lifetime Spectra in Coupled PbS Colloidal Quantum Dots. *Journal of Physical Chemistry C*, **2014**, 118, 19484-19491	3.8	8
242	Truncated-correlation photothermal coherence tomography for deep subsurface analysis. *Nature Photonics*, **2014**, 8, 635-642	33.9	62
241	Noninvasive in-vehicle alcohol detection with wavelength-modulated differential photothermal radiometry. *Biomedical Optics Express*, **2014**, 5, 2333-40	3.5	13
240	Photothermal tomography for the functional and structural evaluation, and early mineral loss monitoring in bones. *Biomedical Optics Express*, **2014**, 5, 2488-502	3.5	17
239	Thermally enhanced signal strength and SNR improvement of photoacoustic radar module. *Biomedical Optics Express*, **2014**, 5, 2785-90	3.5	8
238	Quantitative heterodyne lock-in carrierographic imaging of silicon wafers and solar cells **2014**,		5
237	Truncated-correlation photothermal coherence tomography of artificially demineralized animal bones: two- and three-dimensional markers for mineral loss monitoring. *Journal of Biomedical Optics*, **2014**, 19, 026015	3.5	12
236	Coregistered photoacoustic and ultrasonic signatures of early bone density variations. *Journal of Biomedical Optics*, **2014**, 19, 36015	3.5	22
235	Features of the Frequency- and Time-Domain Photoacoustic Modalities. *International Journal of Thermophysics*, **2013**, 34, 1398-1404	2.1	6
234	Exciton Lifetime Broadening and Distribution Profiles of PbS Colloidal Quantum Dot Thin Films Using Frequency- and Temperature-Scanned Photocarrier Radiometry. *Journal of Physical Chemistry C*, **2013**, 117, 23333-23348	3.8	27
233	Photoacoustic correlation signal-to-noise ratio enhancement by coherent averaging and optical waveform optimization. *Review of Scientific Instruments*, **2013**, 84, 104907	1.7	15
232	Equivalence of Normalized Thermal-Wave Fields Between Curved and Flat Surfaces and Its Application in the Characterization of Curved Samples. *International Journal of Thermophysics*, **2013** , 34, 1429-1434	2.1	
231	Ultra-Deep Bone Diagnostics with Fat–Skin Overlayers Using New Pulsed Photothermal Radar. *International Journal of Thermophysics*, **2013**, 34, 1481-1488	2.1	7
230	Characterization of the Thermal-Wave Field in a Wedge-Shaped Solid Using the Green's Function Method. *International Journal of Thermophysics*, **2013**, 34, 1585-1590	2.1	
229	Silicon solar cell electrical parameter measurements through quantitative lock-in carrierographic (photoluminescence) and thermographic imaging. *Physica Status Solidi (A) Applications and Materials Science*, **2013**, 210, 2135-2145	1.6	21
228	Applications of ultrasensitive wavelength-modulated differential photothermal radiometry to noninvasive glucose detection in blood serum. *Journal of Biophotonics*, **2013**, 6, 911-9	3.1	6

227	Photoacoustic and ultrasonic signatures of early bone density variations **2013**,		1
226	Contactless measurement of electrical parameters and estimation of current-voltage characteristics of Si solar cells using the illumination intensity dependence of lock-in carrierography (photoluminescence) images. *Journal of Applied Physics*, **2013**, 114, 104509	2.5	18
225	Photothermal Radiometry and Modulated Luminescence: Applications for Dental Caries Detection **2013**, 1047		2
224	Effective interface state effects in hydrogenated amorphous-crystalline silicon heterostructures using ultraviolet laser photocarrier radiometry. *Journal of Applied Physics*, **2013**, 114, 244506	2.5	12
223	Thermal-wave fields in solid wedges using the Green function method: Theory and experiment. *Journal of Applied Physics*, **2013**, 113, 133501	2.5	4
222	Non-destructive measurements of large case depths in hardened steels using the thermal-wave radar. *NDT and E International*, **2012**, 45, 16-21	4.1	14
221	Optoelectronic transport property measurements of an amorphous-silicon-passivated c-silicon wafer using non-contacting methodologies. *Thin Solid Films*, **2012**, 520, 5309-5313	2.2	8
220	Quantitative self-calibrating lock-in carrierographic lifetime imaging of silicon wafers. *Applied Physics Letters*, **2012**, 101, 242107	3.4	27
219	Statistical theory and applications of lock-in carrierographic image pixel brightness dependence on multi-crystalline Si solar cell efficiency and photovoltage. *Journal of Applied Physics*, **2012**, 112, 054505	2.5	21
218	Thermal Coherence Tomography: Depth-Resolved Imaging in Parabolic Diffusion-Wave Fields Using the Thermal-Wave Radar. *International Journal of Thermophysics*, **2012**, 33, 1989-1995	2.1	10
217	Lock-in and Heterodyne Carrierographic Imaging Characterization of Industrial Multicrystalline Silicon Solar Cells. *International Journal of Thermophysics*, **2012**, 33, 2095-2102	2.1	13
216	Modeling of Thermal-Wave Fields in Radially Inhomogeneous Spherical Solids Using the Green Function Method. *International Journal of Thermophysics*, **2012**, 33, 2230-2236	2.1	1
215	Non-invasive Glucose Measurements Using Wavelength Modulated Differential Photothermal Radiometry (WM-DPTR). *International Journal of Thermophysics*, **2012**, 33, 1814	2.1	3
214	Study of Tissue Phantoms, Tissues, and Contrast Agent with the Biophotoacoustic Radar and Comparison to Ultrasound Imaging for Deep Subsurface Imaging. *International Journal of Thermophysics*, **2012**, 33, 1808-1813	2.1	1
213	Detection of Dental Secondary Caries Using Frequency-Domain Infrared Photothermal Radiometry (PTR) and Modulated Luminescence (LUM). *International Journal of Thermophysics*, **2012**, 33, 1778-1786	2.1	5
212	Photoacoustic, Photothermal, and Diffusion-Wave Sciences in the Twenty-First Century: Triumphs of the Past Set the Trends for the Future. *International Journal of Thermophysics*, **2012**, 33, 1776-1777	2.1	7
211	Slow and fast ultrasonic wave detection improvement in human trabecular bones using Golay code modulation. *Journal of the Acoustical Society of America*, **2012**, 132, EL222-8	2.2	21
210	Frequency domain photoacoustic correlation (radar) imaging: a novel methodology for non-invasive imaging of biological tissues **2012**,		2

209	Noninvasive glucose detection in human skin using wavelength modulated differential laser photothermal radiometry. *Biomedical Optics Express*, **2012**, 3, 3012-21	3.5	32
208	Laser induced thermal-wave fields in multi-layered spherical solids based on Green function method. *Journal of Applied Physics*, **2012**, 112, 033521	2.5	3
207	Combined photoacoustic and ultrasonic diagnosis of early bone loss and density variations **2012**,		3
206	Perspective: Photopyroelectric effects and pyroelectric measurements: "Invited review article: Photopyroelectric calorimeter for the simultaneous thermal, optical, and structural characterization of samples over phase transitions" [Rev. Sci. Instrum. 82, 121101 (2011)]. *Review of Scientific Instruments*, **2011**, 82, 120901	1.7	4
205	Frequency-domain photoacoustic phased array probe for biomedical imaging applications. *Optics Letters*, **2011**, 36, 4560-2	3	33
204	Linear frequency modulation photoacoustic radar: optimal bandwidth and signal-to-noise ratio for frequency-domain imaging of turbid media. *Journal of the Acoustical Society of America*, **2011**, 130, 1313-24	2.2	32
203	Thermal conductivity depth-profile reconstruction of multilayered cylindrical solids using the thermal-wave Green function method. *Journal of Applied Physics*, **2011**, 109, 113534	2.5	9
202	Thermal coherence tomography using match filter binary phase coded diffusion waves. *Physical Review Letters*, **2011**, 107, 165901	7.4	58
201	Quantitative remineralization evolution kinetics of artificially demineralized human enamel using photothermal radiometry and modulated luminescence. *Journal of Biophotonics*, **2011**, 4, 788-804	3.1	8
200	Comparison between pulsed laser and frequency-domain photoacoustic modalities: signal-to-noise ratio, contrast, resolution, and maximum depth detectivity. *Review of Scientific Instruments*, **2011**, 82, 094903	1.7	42
199	Thermophotonic radar imaging: An emissivity-normalized modality with advantages over phase lock-in thermography. *Applied Physics Letters*, **2011**, 98, 163706	3.4	79
198	Wavelength-modulated differential photothermal radiometry: theory and experimental applications to glucose detection in water. *Physical Review E*, **2011**, 84, 041917	2.4	11
197	Thermophotonic lock-in imaging of early demineralized and carious lesions in human teeth. *Journal of Biomedical Optics*, **2011**, 16, 071402	3.5	33
196	Highly depth-resolved chirped pulse photothermal radar for bone diagnostics. *Review of Scientific Instruments*, **2011**, 82, 074906	1.7	18
195	Signal-to-noise analysis of biomedical photoacoustic measurements in time and frequency domains. *Review of Scientific Instruments*, **2010**, 81, 124901	1.7	41
194	Direct-search deep level photothermal spectroscopy: An enhanced reliability method for overlapped semiconductor defect state characterization. *Applied Physics Letters*, **2010**, 96, 262112	3.4	7
193	Similarity normalization method for thermal conductivity depth profile reconstructions from inhomogeneous cylindrical and flat solids using thermal waves. *Journal of Applied Physics*, **2010**, 107, 053503	2.5	6
192	Accurate reconstruction of the thermal conductivity depth profile in case hardened steel. *Journal of Applied Physics*, **2010**, 107, 083519	2.5	22

191	Optical and thermal depth profile reconstructions of inhomogeneous photopolymerization in dental resins using photothermal waves. *Journal of Applied Physics*, **2010**, 108, 054902	2.5	15
190	Curvature-insensitive methodology for thermal-wave depth-profilometry in multi-layered curvilinear solids. *Journal Physics D: Applied Physics*, **2010**, 43, 285403	3	2
189	Optothermophysical properties of demineralized human dental enamel determined using photothermally generated diffuse photon density and thermal-wave fields. *Applied Optics*, **2010**, 49, 6938-51	0.2	11
188	Photoacoustic radar imaging signal-to-noise ratio, contrast, and resolution enhancement using nonlinear chirp modulation. *Optics Letters*, **2010**, 35, 1623-5	3	29
187	Infrared lock-in carrierography (photocarrier radiometric imaging) of Si solar cells. *Journal of Applied Physics*, **2010**, 107, 114513	2.5	42
186	Non-destructive infrared optoelectronic lock-in carrierography of mc-Si solar cells. *Quantitative InfraRed Thermography Journal*, **2010**, 7, 35-54	1.1	6
185	Dental diagnostic clinical instrument ("Canary") development using photothermal radiometry and modulated luminescence. *Journal of Physics: Conference Series*, **2010**, 214, 012023	0.3	6
184	Thermal-wave radar. *Journal of Physics: Conference Series*, **2010**, 214, 012088	0.3	1
183	Infrared photocarrier radiometry, modulated photovoltage and electrical characteristics of polycrystalline Si solar cells. *Journal of Physics: Conference Series*, **2010**, 214, 012111	0.3	8
182	Laser photothermal non-destructive inspection method for hairline crack detection in unsintered automotive parts: A statistical approach. *NDT and E International*, **2010**, 43, 283-296	4.1	3
181	Laser induced thermal-wave fields in bilayered spherical solids. *Review of Scientific Instruments*, **2009**, 80, 034903	1.7	10
180	Reconstruction of radial thermal conductivity depth profile in case hardened steel rods. *Journal of Applied Physics*, **2009**, 105, 083517	2.5	15
179	Thermal-wave radar: a novel subsurface imaging modality with extended depth-resolution dynamic range. *Review of Scientific Instruments*, **2009**, 80, 034902	1.7	86
178	Dynamic photophysical processes in laser-irradiated human cortical skull bone measured by means of modulated diffuse luminescence. *Physical Review E*, **2009**, 80, 021920	2.4	
177	Theoretical analysis of coupled diffuse-photon-density and thermal-wave field depth profiles photothermally generated in layered turbid dental structures. *Journal of Applied Physics*, **2009**, 105, 102022	2.5	20
176	Broadening effects and ergodicity in deep level photothermal spectroscopy of defect states in semi-insulating GaAs: A combined temperature-, pulse-rate-, and time-domain study of defect state kinetics. *Journal of Applied Physics*, **2009**, 105, 103712	2.5	14
175	Preface to Special Topic: Applied Biophysics. *Journal of Applied Physics*, **2009**, 105, 101901	2.5	
174	Photothermal determination of thermal diffusivity and polymerization depth profiles of polymerized dental resins. *Journal of Applied Physics*, **2009**, 106, 114906	2.5	13

173	Laser photothermal radiometric instrumentation for fast in-line industrial steel hardness inspection and case depth measurements. *Applied Optics*, **2009**, 48, C11-23	0.2	11
172	Robust multiparameter method of evaluating the optical and thermal properties of a layered tissue structure using photothermal radiometry. *Applied Optics*, **2009**, 48, 3192-203	0.2	15
171	Photothermoacoustic imaging of biological tissues: maximum depth characterization comparison of time and frequency-domain measurements. *Journal of Biomedical Optics*, **2009**, 14, 044025	3.5	30
170	Frequency-domain photothermoacoustics: Alternative imaging modality of biological tissues. *Journal of Applied Physics*, **2009**, 105, 102029	2.5	53
169	Quantitative analysis of incipient mineral loss in hard tissues **2009**,		7
168	Robust multiparameter method of evaluating the optical and thermal properties of a layered tissue structure using photothermal radiometry **2009**, 48, 3193		8
167	Characterization of hardened cylindrical samples using photothermal radiometry. *European Physical Journal: Special Topics*, **2008**, 153, 123-126	2.3	1
166	In vitro detection and quantification of enamel and root caries using infrared photothermal radiometry and modulated luminescence. *Journal of Biomedical Optics*, **2008**, 13, 034025	3.5	27
165	Experimental investigation of demineralization and remineralization of human teeth using infrared photothermal radiometry and modulated luminescence **2008**,		6
164	Influence of laser beam size on measurement sensitivity of thermophysical property gradients in layered structures using thermal-wave techniques. *Journal of Applied Physics*, **2008**, 103, 043510	2.5	12
163	Reconstruction of depth profiles of thermal conductivity of case hardened steels using a three-dimensional photothermal technique. *Journal of Applied Physics*, **2008**, 104, 113518	2.5	20
162	Effect of laser beam size on measurement contrast of thermophysical gradients in layered structures using thermal-wave techniques. *European Physical Journal: Special Topics*, **2008**, 153, 95-98	2.3	
161	Theoretical analysis of PPE measurements in liquids using a thermal-wave cavity. *European Physical Journal: Special Topics*, **2008**, 153, 127-129	2.3	
160	Dimensionality considerations of thermal transport mechanisms in a Thermal-Wave Cavity. *European Physical Journal: Special Topics*, **2008**, 153, 131-134	2.3	1
159	Photocarrier radiometric characterization of electronic transport properties of H+ implanted silicon wafers. *European Physical Journal: Special Topics*, **2008**, 153, 271-274	2.3	
158	Noncontact Deep Level Photo-Thermal Spectroscopy of semi-insulating GaAs. *European Physical Journal: Special Topics*, **2008**, 153, 283-285	2.3	2
157	Investigation of H+ implanted silicon wafers with two-beam cross-modulation photocarrier radiometry. *European Physical Journal: Special Topics*, **2008**, 153, 295-297	2.3	2
156	On the non-linear dependence of photocarrier radiometry signals from Si wafers on the intensity of the laser beam. *European Physical Journal: Special Topics*, **2008**, 153, 317-320	2.3	

155	Evaluation of effective case depth in heat treated steel products using photothermal radiometry. *European Physical Journal: Special Topics*, **2008**, 153, 373-376	2.3	2
154	Free carrier modulation of a sub-bandgap CW laser beam: A Si optoelectronic chopper. *European Physical Journal: Special Topics*, **2008**, 153, 387-390	2.3	1
153	Photothermal radiometry with spherical solids. *European Physical Journal: Special Topics*, **2008**, 153, 415-418	2.3	3
152	Fourier-domain methodology for depth-selective photothermoacoustic imaging of tissue chromophores. *European Physical Journal: Special Topics*, **2008**, 153, 443-448	2.3	6
151	Dental biothermophotonics: A quantitative photothermal analysis of early dental demineralization. *European Physical Journal: Special Topics*, **2008**, 153, 463-465	2.3	4
150	Interproximal dental caries detection using Photothermal Radiometry (PTR) and Modulated Luminescence (LUM). *European Physical Journal: Special Topics*, **2008**, 153, 467-469	2.3	7
149	A calibration technique for frequency domain photothermoacoustics. *European Physical Journal: Special Topics*, **2008**, 153, 491-495	2.3	1
148	Polypyrrole nanoparticles as a thermal transducer of NIR radiation in hot-melt adhesives. *Journal of Materials Chemistry*, **2007**, 17, 4309		45
147	Case depth determination in heat-treated industrial steel products using photothermal radiometric interferometric phase minima. *NDT and E International*, **2007**, 40, 158-167	4.1	18
146	Nonlinear Dependence of Photocarrier Radiometry Signals from p-Si Wafers on Optical Excitation Intensity. *Journal of the Electrochemical Society*, **2007**, 154, H983	3.9	22
145	Optimally accurate thermal-wave cavity photopyroelectric measurements of pressure-dependent thermophysical properties of air: theory and experiments. *Review of Scientific Instruments*, **2007**, 78, 104902	1.7	8
144	Frequency domain photothermal radiometry with spherical solids. *Journal of Applied Physics*, **2007**, 101, 083503	2.5	26
143	Characterization of hardened cylindrical C1018 steel rods (0.14%-0.2% C, 0.6%-0.9% Mn) using photothermal radiometry. *Review of Scientific Instruments*, **2007**, 78, 054902	1.7	12
142	Noncontact deep level photo-thermal spectroscopy: Technique and application to semi-insulating GaAs Wafers. *Applied Physics Letters*, **2007**, 90, 062119	3.4	13
141	Detection of interproximal demineralized lesions on human teeth in vitro using frequency-domain infrared photothermal radiometry and modulated luminescence. *Journal of Biomedical Optics*, **2007**, 12, 034028	3.5	31
140	Photothermal detection of incipient dental caries: experiment and modeling **2007**,		4
139	Fourier-domain biophotoacoustic subsurface depth selective amplitude and phase imaging of turbid phantoms and biological tissue. *Journal of Biomedical Optics*, **2006**, 11, 044006	3.5	49
138	Electronic Defect and Contamination Monitoring in Si Wafers Using Spectrally Integrated Photocarrier Radiometry. *Journal of the Electrochemical Society*, **2006**, 153, G283	3.9	16

137	Quantitative one-dimensional thermal-wave cavity measurements of fluid thermophysical properties through equivalence studies with three-dimensional geometries. *Review of Scientific Instruments*, **2006**, 77, 064906	1.7	19
136	Photocarrier Radiometric Lifetime Measurements of Intrinsic Amorphous-Crystalline Silicon Heterostructure. *Materials Research Society Symposia Proceedings*, **2006**, 910, 3		1
135	Ultrahigh-resolution pyroelectric thermal-wave technique for the measurement of thermal diffusivity of low-concentration water-alcohol mixtures. *Review of Scientific Instruments*, **2005**, 76, 104901	1.7	13
134	High-Precision and High-Resolution Measurements of Thermal Diffusivity and Infrared Emissivity of Water–Methanol Mixtures Using a Pyroelectric Thermal Wave Resonator Cavity: Frequency-Scan Approach. *International Journal of Thermophysics*, **2005**, 26, 837-854	2.1	29
133	Photothermal radiometric quantitative detection of the different degrees of demineralization of dental enamel by acid etching. *European Physical Journal Special Topics*, **2005**, 125, 721-723		7
132	Influence of vignetting on signal analysis of photocarrier radiometry of semiconductor wafers. *Review of Scientific Instruments*, **2005**, 76, 063703	1.7	7
131	Thermal-wave nondestructive evaluation of cylindrical composite structures using frequency-domain photothermal radiometry. *Journal of Applied Physics*, **2005**, 97, 014911	2.5	34
130	Measurement accuracy analysis of photocarrier radiometric determination of electronic transport parameters of silicon wafers. *Journal of Applied Physics*, **2005**, 97, 023701	2.5	46
129	Accuracy of photocarrier radiometric measurement of electronic transport properties of ion-implanted silicon wafers. *Journal of Applied Physics*, **2004**, 96, 186-196	2.5	36
128	Photothermal depth profilometry of heat-treated hardened 0.15%–0.2%C, 0.6%–0.9%Mn Steels. *Journal of Applied Physics*, **2004**, 96, 1521-1528	2.5	5
127	Ion implant dose dependence of photocarrier radiometry at multiple excitation wavelengths. *Applied Physics Letters*, **2004**, 84, 5219-5221	3.4	27
126	Deep subsurface electronic defect image contrast and resolution amplification in Si wafers using infrared photocarrier radiometry. *Applied Physics Letters*, **2004**, 85, 1713-1715	3.4	16
125	Three-layer photocarrier radiometry model of ion-implanted silicon wafers. *Journal of Applied Physics*, **2004**, 95, 7832-7840	2.5	34
124	Photothermal Radiometry with Solid Cylindrical Samples. *Journal of Applied Physics*, **2004**, 96, 3756-3762	2.5	38
123	Inspection of an end quenched 0.15%–0.2% C, 0.6%–0.9% Mn steel jominy bar with photothermal radiometric techniques. *Journal of Applied Physics*, **2004**, 96, 1929-1933	2.5	3
122	Nonintrusive, noncontacting frequency-domain photothermal radiometry and luminescence depth profilometry of carious and artificial subsurface lesions in human teeth. *Journal of Biomedical Optics*, **2004**, 9, 804-19	3.5	36
121	Diagnosis of pit and fissure caries using frequency-domain infrared photothermal radiometry and modulated laser luminescence. *Caries Research*, **2004**, 38, 497-513	4.2	43
120	Development of a laser photothermoacoustic frequency-swept system for subsurface imaging: theory and experiment. *Journal of the Acoustical Society of America*, **2004**, 116, 3523-33	2.2	45

119	Infrared photothermal radiometry of deep subsurface defects in semiconductor materials. *Review of Scientific Instruments*, **2003**, 74, 839-841	1.7	9
118	Common-mode-rejection demodulation lock-in technique for high-resolution characterization of ion implantation in silicon wafers. *Review of Scientific Instruments*, **2003**, 74, 624-627	1.7	1
117	New Photopyroelectric Technique for Precise Measurements of the Thermal Effusivity of Transparent Liquids. *International Journal of Thermophysics*, **2003**, 24, 463-471	2.1	25
116	Infrared photocarrier radiometry of semiconductors: Physical principles, quantitative depth profilometry, and scanning imaging of deep subsurface electronic defects. *Physical Review B*, **2003**, 67,	3.3	136
115	Self-normalized photothermal technique for accurate thermal diffusivity measurements in thin metal layers. *Review of Scientific Instruments*, **2003**, 74, 5219-5225	1.7	43
114	Self-consistent photothermal techniques: Application for measuring thermal diffusivity in vegetable oils. *Review of Scientific Instruments*, **2003**, 74, 700-702	1.7	41
113	Spectroscopic photothermal radiometry as a deep subsurface depth profilometric technique in semiconductors. *Review of Scientific Instruments*, **2003**, 74, 529-532	1.7	3
112	Transverse depth-profilometric hardness photothermal phase imaging of heat treated steels. *Journal of Applied Physics*, **2003**, 94, 5543-5548	2.5	8
111	Carrier-density-wave transport property depth profilometry using spectroscopic photothermal radiometry of silicon wafers I: Theoretical aspects. *Journal of Applied Physics*, **2003**, 93, 5236-5243	2.5	24
110	Temperature dependence of carrier mobility in Si wafers measured by infrared photocarrier radiometry. *Applied Physics Letters*, **2003**, 82, 4077-4079	3.4	73
109	Carrier-density-wave transport property depth profilometry using spectroscopic photothermal radiometry of silicon wafers II: Experimental and computational aspects. *Journal of Applied Physics*, **2003**, 93, 5244-5250	2.5	16
108	Novel Transmission Open Photoacoustic Cell Configuration for Thermal Diffusivity Measurements in Liquids. *International Journal of Thermophysics*, **2002**, 23, 605-614	2.1	15
107	Frequency-domain theory of laser infrared photothermal radiometric detection of thermal waves generated by diffuse-photon-density wave fields in turbid media. *Physical Review E*, **2002**, 65, 021909	2.4	23
106	Self-normalized photoacoustic thermal diffusivity measurements of dental resins. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2002**, 51, 639-646	3	
105	Normalized photoacoustic techniques for thermal diffusivity measurements of buried layers in multilayered systems. *Journal of Applied Physics*, **2002**, 92, 3047-3055	2.5	33
104	Diffusion-wave laser radiometric diagnostic quality-control technologies for materials NDE/NDT. *NDT and E International*, **2001**, 34, 277-287	4.1	7
103	Laser Infrared Photothermal Radiometric and ELYMAT Characterizations of p-Si Wafers Annealed in the Presence of an External Electric Field. *Physica Status Solidi A*, **2001**, 185, 471-478		3
102	Physical mechanisms of thermal-diffusivity depth-profile generation in a hardened low-alloy Mn, Si, Cr, Mo steel reconstructed by photothermal radiometry. *Journal of Applied Physics*, **2001**, 89, 7879-7884	2.5	29

101	Infrared radiometry-based background-compensated thermometric instrument for noncontact temperature and friction measurements. *Review of Scientific Instruments*, **2001**, 72, 2483-2489	1.7	3
100	Thermal diffusivity measurements in liquids using signal common-mode-rejection demodulation in a thermal-wave cavity. *Journal of Applied Physics*, **2001**, 90, 3296-3300	2.5	8
99	Simple, accurate, and precise measurements of thermal diffusivity in liquids using a thermal-wave cavity. *Review of Scientific Instruments*, **2001**, 72, 2649-2652	1.7	20
98	Thermal diffusivity measurements in the photoacoustic open-cell configuration using simple signal normalization techniques. *Journal of Applied Physics*, **2001**, 90, 2273-2279	2.5	51
97	Methods for surface roughness elimination from thermal-wave frequency scans in thermally inhomogeneous solids. *Journal of Applied Physics*, **2001**, 90, 1255-1265	2.5	15
96	Structure and the Reflectionless/Refractionless Nature of Parabolic Diffusion-Wave Fields. *Physical Review Letters*, **2001**, 87,	7.4	68
95	Diffusion-Wave Fields **2001**,		216
94	Carrier-Density-Wave Fields in Electronic Solids / Semiconductors **2001**, 584-661		3
93	Thermal-wave resonator cavity design and measurements of the thermal diffusivity of liquids. *Review of Scientific Instruments*, **2000**, 71, 2933-2937	1.7	89
92	Lock-in common-mode rejection demodulation: Measurement technique and applications to thermal-wave detection. Experimental. *Review of Scientific Instruments*, **2000**, 71, 2445-2451	1.7	10
91	Lock-in common-mode rejection demodulation: Measurement technique and applications to thermal-wave detection: Theoretical. *Review of Scientific Instruments*, **2000**, 71, 2440-2444	1.7	15
90	An adaptive multiscale inverse scattering approach to photothermal depth profilometry. *Circuits, Systems, and Signal Processing*, **2000**, 19, 339-363	2.2	6
89	Laser infrared photothermal radiometry of electronic solids: Principles and applications to industrial semiconductor Si wafers. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2000**, 18, 705-708	2.9	14
88	Instrumental noise and detectivity analysis of photopyroelectric destructive thermal-wave interferometry. *Review of Scientific Instruments*, **2000**, 71, 1961-1970	1.7	5
87	Self-normalized photothermal techniques for thermal diffusivity measurements. *Journal of Applied Physics*, **2000**, 88, 6815-6820	2.5	15
86	Computational Aspects of Laser Radiometric Multiparameter Fit for Carrier Transport Property Measurements in Si Wafers. *Journal of the Electrochemical Society*, **2000**, 147, 687	3.9	39
85	Diffusion Waves and their Uses. *Physics Today*, **2000**, 53, 29-34	0.9	147
84	A novel PVDF thin-film photopyroelectric thermal-wave interferometry. *Ferroelectrics*, **2000**, 236, 235-246	0.6	5

83	Deconvolution and measurement of bulk and surface optical absorptions in Ti:Al2O3 crystals using photopyroelectric interferometry. *Review of Scientific Instruments*, **1999**, 70, 3115-3124	1.7	2
82	Theoretical and experimental aspects of three-dimensional infrared photothermal radiometry of semiconductors. *Journal of Applied Physics*, **1999**, 85, 7392-7397	2.5	30
81	Detectivity comparison between thin-film Pd/PVDF photopyroelectric interferometric and optical reflectance hydrogen sensors. *Review of Scientific Instruments*, **1999**, 70, 4370-4376	1.7	7
80	Laser infrared photothermal radiometric depth profilometry of steels and its potential in rail track evaluation. *NDT and E International*, **1999**, 32, 437-443	4.1	16
79	Thermophysical Properties of Thermal Sprayed Coatings on Carbon Steel Substrates by Photothermal Radiometry. *International Journal of Thermophysics*, **1999**, 20, 1587-1602	2.1	34
78	Purely thermal-wave photopyroelectric interferometry. *Journal of Applied Physics*, **1999**, 85, 8366-8377	2.5	20
77	Measurement of thermal diffusivity of air using photopyroelectric interferometry. *Review of Scientific Instruments*, **1999**, 70, 2372-2378	1.7	20
76	Laser infrared photothermal radiometry of semiconductors: principles and applications to solid state electronics. *Solid-State Electronics*, **1998**, 42, 1-15	1.7	54
75	Nonlinear inverse scattering methods for thermal-wave slice tomography: a wavelet domain approach. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **1998**, 15, 1545	1.8	14
74	Application of a generalized methodology for quantitative thermal diffusivity depth profile reconstruction in manufactured inhomogeneous steel-based materials. *Journal of Applied Physics*, **1998**, 83, 3495-3498	2.5	44
73	Measurements of the thermodynamic equation of state via the pressure dependence of thermophysical properties of air by a thermal-wave resonant cavity. *Review of Scientific Instruments*, **1998**, 69, 2918-2923	1.7	24
72	Signal generation mechanisms, intracavity-gas thermal-diffusivity temperature dependence, and absolute infrared emissivity measurements in a thermal-wave resonant cavity. *Review of Scientific Instruments*, **1998**, 69, 197-203	1.7	45
71	Buried thermoplastic layer diagnostics by the use of combined frequency-domain and impulse response photo-thermo-mechanical radiometry. *Review of Scientific Instruments*, **1998**, 69, 507-511	1.7	10
70	Thermal-wave infrared radiometric slice diffraction tomography with back-scattering and transmission reconstructions: experimental. *Inverse Problems*, **1997**, 13, 1413-1425	2.3	10
69	Image-enhanced thermal-wave slice diffraction tomography with numerically simulated reconstructions. *Inverse Problems*, **1997**, 13, 1393-1412	2.3	21
68	Relative sensitivity of photomodulated reflectance and photothermal infrared radiometry to thermal and carrier plasma waves in semiconductors. *Journal of Applied Physics*, **1997**, 82, 1853-1859	2.5	33
67	Infrared photothermal radiometric deep-level transient spectroscopy of shallow B+ dopant states in p-Si. *Applied Physics Letters*, **1997**, 71, 2671-2673	3.4	3
66	Monitoring of ion implantation in Si with carrier plasma waves using infrared photothermal radiometry. *Applied Physics Letters*, **1997**, 71, 1531-1533	3.4	14

65	Diagnostics of nonradiative defects in the bulk and surface of Brewster-cut Ti:sapphire laser materials using photothermal radiometry. *IEEE Journal of Quantum Electronics*, **1997**, 33, 2301-2310	2	2
64	Measurements of the thermal diffusivity of aluminum using frequency-scanned, transient, and rate window photothermal radiometry. Theory and experiment. *International Journal of Thermophysics*, **1997**, 18, 221-250	2.1	11
63	Noncontacting photothermal radiometry of SiO2/Si MOS capacitor structures. *Solid-State Electronics*, **1997**, 41, 591-597	1.7	20
62	Noncontact Carrier Lifetime Depth Profiling of Ion-Implanted Si Using Photothermal Radiometry. *Physica Status Solidi A*, **1997**, 161, R13-R14		6
61	Study of the thin-film palladium/hydrogen system by an optical transmittance method. *Review of Scientific Instruments*, **1996**, 67, 3981-3983	1.7	17
60	Thermal-wave resonant-cavity measurements of the thermal diffusivity of air: A comparison between cavity-length and modulation-frequency scans. *International Journal of Thermophysics*, **1996**, 17, 1241-1254	2.1	41
59	Generalized methodology for thermal diffusivity depth profile reconstruction in semi-infinite and finitely thick inhomogeneous solids. *Journal of Applied Physics*, **1996**, 80, 5570-5578	2.5	47
58	Noncontact measurement of transport properties of long-bulk-carrier-lifetime Si wafers using photothermal radiometry. *Applied Physics Letters*, **1996**, 69, 2522-2524	3.4	34
57	Hamiltonian plasma-harmonic oscillator theory: Generalized depth profilometry of electronically continuously inhomogeneous semiconductors and the inverse problem. *Journal of Applied Physics*, **1996**, 80, 5278-5288	2.5	13
56	Theory of nonradiative decay dynamics in intensely pumped solid-state laser media via laser photothermal diagnostics. *Journal of Applied Physics*, **1996**, 80, 6107-6119	2.5	12
55	Thermal-wave resonator cavity. *Review of Scientific Instruments*, **1995**, 66, 4999-5005	1.7	151
54	Noncontact photothermal infrared radiometric deep-level transient spectroscopy of GaAs wafers. *Applied Physics Letters*, **1995**, 67, 1582-1584	3.4	8
53	Quantitative in-situ photopyroelectric spectroscopy of optoelectronic quantum structures. Theory and experiment with Al0.6Ga0.4As/GaAs quantum wells. *Ferroelectrics*, **1995**, 165, 1-26	0.6	7
52	Separation of thermal-wave and optical reflectance effects in a palladium-photopyroelectric hydrogen sensor. *Ferroelectrics*, **1995**, 165, 193-203	0.6	7
51	A PILOT STUDY IN NON-CONTACT LASER PHOTOTHERMAL ARCHAEOMETRY OF ANCIENT STATUARY PEDESTAL STONES FROM CYPRUS. *Archaeometry*, **1995**, 37, 257-270	1.6	1
50	Purely thermal wave based nonchemical photopyroelectric gas sensor: Application to hydrogen. *Review of Scientific Instruments*, **1994**, 65, 1978-1982	1.7	6
49	Photopyroelectric deconvolution of bulk and surface optical-absorption and nonradiative energy conversion efficiency spectra in Ti:Al2O3 crystals. *Journal of Applied Physics*, **1994**, 75, 8090-8097	2.5	17
48	A comparison between conventional photothermal frequency scan and the lock-in rate window method in measuring thermal diffusivity of solids. *Review of Scientific Instruments*, **1994**, 65, 2344-2350	1.7	8

47	Characterization of a purely thermal wave based photopyroelectric gas sensor for hydrogen detection. *Review of Scientific Instruments*, **1994**, 65, 1983-1987	1.7	6
46	Depth profilometry of near-surface inhomogeneities via laser-photothermal probing of the thermal diffusivity of condensed phases. *International Journal of Thermophysics*, **1994**, 15, 1299-1309	2.1	6
45	Signal-to-noise ratio in lock-in amplifier synchronous detection: A generalized communications systems approach with applications to frequency, time, and hybrid (rate window) photothermal measurements. *Review of Scientific Instruments*, **1994**, 65, 3309-3323	1.7	41
44	Photopyroelectric detection of hydrogen/oxygen mixtures. *Review of Scientific Instruments*, **1993**, 64, 3563-3571	1.7	7
43	Computational thermal-wave slice tomography with backpropagation and transmission reconstructions. *Review of Scientific Instruments*, **1993**, 64, 3548-3562	1.7	18
42	Theory of second harmonic thermal-wave generation: One-dimensional geometry. *International Journal of Thermophysics*, **1993**, 14, 321-337	2.1	18
41	Photoacoustic frequency-domain depth profilometry of surface-layer inhomogeneities: Application to laser processed steels. *Journal of Applied Physics*, **1992**, 71, 6029-6035	2.5	37
40	Quantitative Laser Beam Deflection Study of Liquid-Liquid Interdiffusion in the Water-Sugar System.. *Analytical Sciences*, **1992**, 8, 131-136	1.7	3
39	Lock-in rate-window thermomodulation (thermal wave) and photomodulation spectrometry. *Review of Scientific Instruments*, **1992**, 63, 2977-2988	1.7	14
38	Non-destructive depth profiling of laser-processed Zr-2.5 Nb alloy by IR photothermal radiometry. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **1992**, 159, 111-118	5.3	23
37	. *Journal of Physics A*, **1991**, 24, 2485-2505		30
36	Photothermal electrostatics of the Pd-polyvinylidene fluoride photopyroelectric hydrogen gas sensor. *Journal of Applied Physics*, **1991**, 70, 4496-4504	2.5	13
35	Quantitative photoacoustic depth profilometry of magnetic field-induced thermal diffusivity inhomogeneity in the liquid crystal octylcyanobiphenyl. *Journal of Applied Physics*, **1991**, 70, 1771-1777	2.5	27
34	Photoacoustic frequency-domain depth profiling of continuously inhomogeneous condensed phases: Theory and simulations for the inverse problem. *Journal of Applied Physics*, **1991**, 70, 1761-1770	2.5	56
33	Reply to [Comment on [Coupled ac photocurrent and photothermal reflectance response theory of semiconducting p-n junctions I and II][J. Appl. Phys. 70, 1087 (1991)]. *Journal of Applied Physics*, **1991**, 70, 1086-1086	2.5	0
32	Effects of secondary laser illumination during the transient measurement in optical and electrical deep level transient spectroscopy. *Applied Physics Letters*, **1991**, 59, 1861-1863	3.4	2
31	Pyroelectric sensors for the photothermal analysis of condensed phases. *Ferroelectrics*, **1991**, 118, 379-406	0.6	45
30	Photopyroelectric Measurement of the Thermal Diffusivity of Recrystallized High Purity Aluminum. *Research in Nondestructive Evaluation*, **1991**, 3, 69-80	0.9	8

29	Photopyroelectric measurement of the thermal diffusivity of YBa2Cu3O7-x AND Bi2Sr2CaCu2Ox. *Ferroelectrics*, **1991**, 118, 425-433	0.6	10
28	Optical absorption coefficient and non-radiative quantum efficiency photopyroelectric spectra of pure crystal silicon from a single modulation frequency. *Ferroelectrics*, **1991**, 118, 411-424	0.6	9
27	Photothermal measurements of internal quantum and energy efficiencies of semiconductor photoelectrodes. A review.. *Analytical Sciences*, **1990**, 6, 491-503	1.7	7
26	Optical power monitor using a thin-film pyroelectric bimorph. *Review of Scientific Instruments*, **1990** , 61, 1038-1043	1.7	2
25	Photothermal reflectance investigation of processed silicon. II. Signal generation and lattice temperature dependence in ion-implanted and amorphous thin layers. *Journal of Applied Physics*, **1990**, 67, 2822-2830	2.5	32
24	Infrared real-time-normalized photopyroelectric measurements of crystalline germanium: Instrumentation and spectroscopy. *Review of Scientific Instruments*, **1990**, 61, 2360-2367	1.7	21
23	Surface hydrogen–palladium studies using a new photopyroelectric detector. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1990**, 8, 3980-3983	2.9	10
22	Photothermal reflectance investigation of processed silicon. I. Room-temperature study of the induced damage and of the annealing kinetics of defects in ion-implanted wafers. *Journal of Applied Physics*, **1990**, 67, 2815-2821	2.5	44
21	Solid-state sensors for trace hydrogen gas detection. *Journal of Applied Physics*, **1990**, 68, R1-R30	2.5	182
20	Operating characteristics and comparison of photopyroelectric and piezoelectric sensors for trace hydrogen gas detection. I. Development of a new photopyroelectric sensor. *Journal of Applied Physics*, **1989**, 66, 3975-3985	2.5	22
19	Photopyroelectric thermal wave detection via contactless capacitive polyvinylidene fluoride (PVDF)-metal probe-tip coupling. *Review of Scientific Instruments*, **1989**, 60, 306-316	1.7	27
18	Coupled ac photocurrent and photothermal reflectance response theory of semiconducting p-n junctions. I. *Journal of Applied Physics*, **1989**, 66, 5572-5583	2.5	35
17	Operating characteristics and comparison of photopyroelectric and piezoelectric sensors for trace hydrogen gas detection. II. Piezoelectric quartz-crystal microbalance sensor. *Journal of Applied Physics*, **1989**, 66, 3986-3992	2.5	23
16	Combined ac photocurrent and photothermal reflectance measurements in semiconducting p-n junctions. II. *Journal of Applied Physics*, **1989**, 66, 5584-5593	2.5	5
15	Laser-induced photothermal reflectance investigation of silicon damaged by arsenic ion implantation: A temperature study. *Applied Physics Letters*, **1989**, 54, 2392-2394	3.4	23
14	Photothermal wave imaging of metal-oxide-semiconductor field-effect transistor structures. *Journal of Applied Physics*, **1988**, 63, 92-98	2.5	34
13	Photopyroelectric thin-film instrumentation and impulse-response detection. Part I: A theoretical model. *Review of Scientific Instruments*, **1987**, 58, 2018-2023	1.7	35
12	Photopyroelectric thin-film instrumentation and impulse-response detection. Part III: Performance and signal recovery techniques. *Review of Scientific Instruments*, **1987**, 58, 2033-2043	1.7	18

11	Photopyroelectric thin-film instrumentation and impulse-response detection. Part II: Methodology. *Review of Scientific Instruments*, **1987**, 58, 2024-2032	1.7	29
10	Photopyroelectric spectroscopy (P2ES) of electronic defect centers in crystalline n-CdS. *Applied Physics A: Solids and Surfaces*, **1987**, 44, 123-130		10
9	Frequency modulated (FM) time delay photoacoustic and photothermal wave spectroscopies. Technique, instrumentation, and detection. Part III: Mirage effect spectrometer, dynamic range, and comparison to pseudo-random-binary-sequence (PRBS) method. *Review of Scientific Instruments*, **1986**, 57, 630-635	1.7	33
8	Frequency modulated (FM) time delay photoacoustic and photothermal wave spectroscopies. Technique, instrumentation, and detection. Part II: Mirage effect spectrometer design and performance. *Review of Scientific Instruments*, **1986**, 57, 622-629	1.7	45
7	Frequency modulated (FM) time delay photoacoustic and photothermal wave spectroscopies. Technique, instrumentation, and detection. Part I: Theoretical. *Review of Scientific Instruments*, **1986**, 57, 617-621	1.7	52
6	Time-delay-domain and pseudorandom-noise photoacoustic and photothermal wave processes: a review of the state of the art. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **1986**, 33, 590-614	3.2	29
5	Hamilton□acobi formulation and quantum theory of thermal wave propagation in the solid state. *Journal of Mathematical Physics*, **1985**, 26, 2676-2683	1.2	32
4	Theory of photopyroelectric spectroscopy of solids. *Journal of Applied Physics*, **1985**, 57, 4421-4430	2.5	306
3	Self-Consistent Semi-Classical Dynamic Theory of Non-Radiative Capture and Emission Statistics in Defect Semiconductors. *Physica Status Solidi (B): Basic Research*, **1984**, 122, 687-701	1.3	2
2	Absolute optical absorption coefficient measurements using transverse photothermal deflection spectroscopy. *Journal of Applied Physics*, **1983**, 54, 3404-3409	2.5	80
1	Time-domain photoacoustic spectroscopy of solids. *Journal of Applied Physics*, **1979**, 50, 4330-4338	2.5	66