

ISI publication list

1. Pawlak, M.; Ramza, K.; Streza, M. *Simultaneously Mapping of In-Depth Thermal Diffusivity and Effective Infrared Absorption Coefficient of Silicon-Doped Gallium Arsenide Wafer Using Lock-in Thermography* **Analytical letters** Volume: 52 Issue:1 Special Issue: SI Pages: 93-101 (2019)
2. Cobirzan, Nicoleta; Thalmaier, Gyorgy; Balog, Anca-Andreea; Streza Mihaela. *Thermophysical properties of fired clay bricks with waste ceramics and paper pulp as pore-forming agent* **Journal of Thermal Analysis and Calorimetry** Volume: 134 Issue: 1 Pages: 843-851 (2018)
3. Belean, Bogdan; Streza, Mihaela; Crisan, Septimiu; et al. *Dorsal Hand Vein Pattern Analysis and Neural Networks for Biometric Authentication* **Studies in Informatics and Control** Volume: 26 Issue: 3 Pages: 305-314 (2017)
4. Streza, M.; Belean, B.; Hodisan, I.; et al. *Improving lock-in thermography detection of microgaps located at the tooth-filling interface using a phase versus amplitude image signal extraction approach* **MEASUREMENT** Volume: 104 Pages: 21-28 (2017)
5. Blanita, Gabriela; Streza, Mihaela; Lazar, Mihaela D.; Lupu D *Kinetics of hydrogen adsorption in MIL-101 single pellets* **International Journal of Hydrogen Energy** Volume: 42 Issue: 5 Pages: 3064-3077 Published: FEB 2 2017
6. Pawlak, Michal, Streza, Mihaela, Morari, Cristian, Strzalkowski, Karol, Depriester, Michael, Chirtoc, Mihai *Quantitative thermal wave phase imaging of an IR semi-transparent GaAs wafer using IR lock-in thermography* **Measurement Science and Technology** Vol. 28, Issue 2, (2017)
7. Lucian CUIBUS^{1*}, Dorin DADARLAT, Mihaela STREZA, Francisc V. DULF, Zorița DIACONEASA, Carmen SOCACIU *Rapid, non-destructive determination of butter adulteration by means of photopyroelectric (PPE) calorimetry* **Journal of Thermal Analysis and Calorimetry**- Vol 127 Issue 2 Pp 1193-1200 (2017)
8. Prejmerean, Cristina; Prodan, Doina; Vlassa, Mihaela; Streza, Mihaela; Buruiana, Tinca; Colceriu, Loredana; Prejmerean, Vasile; Cuc, Stanca; Moldovan, Marioara *ATR technique – an appropriate method for determining the degree of conversion in dental giomers* **Measurement Science and Technology**- Vol. 27 Issue: 12 (2016)
9. M. Streza, S. Longuemart, E. Guilmeau, K. Strzalkowski, K. Touati, M. Depriester, A. Maignan and A. Hadj Sahraoui

An active thermography approach for thermal and electrical characterization of thermoelectric materials, Journal of physics D-Applied Physics– Vol 49 , Issue 28 (2016).

10. Cobirzan N, Balog A –A, Belean B, Borodi G, Dadarlat D, **Streza M*** *Thermophysical properties of masonry units: Accurate characterization by means of photothermal techniques and relationship to porosity and mineral composition* CONSTRUCTION AND BUILDING MATERIALS, vol. 105, pp. 297-306 (2016)
11. **Streza M**, Nut C, Tudoran C, Bunea V, Calborean A, Morari C *Distribution of current in the electrodes of lead-acid batteries: a thermographic analysis approach* JOURNAL OF PHYSICS D-APPLIED PHYSICS Volume: 49 Issue: 5 (2016)
12. Bicanic D, **Streza M**, Doka O, Valinger D, Luterotti S, Ajtony Zs, Kurtanjek Z, Dadarlat D *Non-destructive Measurement of Total Carotenoid Content in Processed Tomato Products: Infrared Lock-In Thermography, Near-Infrared Spectroscopy/Chemometrics, and Condensed Phase Laser-Based Photoacoustics-Pilot Study*, INTERNATIONAL JOURNAL OF THERMOPHYSICS Volume: 36, Issue 9, Pp 2380-88 (2015)
13. Strzalkowski K, Dadarlat D, **Streza M**, Firszt F *On the optimization of experimental parameters in photopyroelectric investigation of thermal diffusivity of solids* THERMOCHIMICA ACTA, Vol. 614, pp 232-238 (2015)
14. Strzalkowski K, Dadarlat D, **Streza M**, Zakrzewski J *Thermal characterization of ZnBeMnSe mixed compounds by means of photopyroelectric and lock-in thermography methods* APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING Vol. 119, Issue 3, pp 1165-71 (2015)
15. **Streza M***, Hodisan I, Prejmerean C, Boue C, Tessier G. *Lock-in thermography, penetrant inspection, and scanning electron microscopy for quantitative evaluation of open micro-cracks at the tooth-restoration interface* JOURNAL OF PHYSICS D-APPLIED PHYSICS, Volume: 48 , Issue: 10 (2015)
16. Strzalkowski, K, **Streza M**, Pawlak M *Lock-in thermography versus PPE calorimetry for accurate measurements of thermophysical properties of solid samples: A comparative study* MEASUREMENT Vol. 64 , pp. 64-70 (2015)
17. Strzalkowski K , **Streza M***, Dadarlat D, Marasek A *Thermal characterization of II-VI binary crystals by photopyroelectric calorimetry and infrared lock-in thermography* JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY Volume: 119 , Issue: 1 pp. 319-327 (2015)

18. Y. Fedala, **M. Streza**, J-P Roger, G. Tessier, C. Boue *Open crack depth sizing by laser stimulated infrared lock-in thermography* **J. Phys. D: Appl. Phys.** 47 465501 (6pp) (2014)
19. Y. Fedala, **M. Streza**, F. Sepulveda, J.-P. Roger, G. Tessier, C. Boué *Infrared lock-in thermography crack localization on metallic surfaces for industrial diagnosis* **J. Nondestruct. Eval.** Vol. 33, Issue , pp. 335-341 (2014)
20. D. Dadarlat, **M. Streza**, O. Onija, C. Prejmerean, L. Silaghi-Dumitrescu, N. Cobirzan, K. Strzałkowski *Complementary photothermal techniques for complete thermal characterization of porous and semi-transparent solids* **J. Therm. Anal. Calorim.**, Vol. 119, Issue 1, pp. 301-08 (2015)
21. L. Silaghi Dumitrescu, D. Dadarlat, **M. Streza**, T. Buruiana, D. Prodan, I. Hodisan, C. Prejmerean *Preparation of a new type of giomers and their thermal characterization by photopyroelectric calorimetry* **J. Therm. Anal. Calorim.** DOI. 10.1007/s10973-013-3561-x, 118:623-630 (2014)
22. D. Dadarlat, **M. Streza**, R. Chan Yu King, F. Roussel, M. Kuriakose, M. Depriester, E. Guilmeau, A. H. Sahraoui *The photothermoelectric technique (PTE), an alternative photothermal calorimetry* **Meas. Sci. Technol.** 25, 1, pp.15603-15610 (2014)
23. D. Dadarlat, S. Longuemart, R. Turcu, **M. Streza**, L. Vekas, A. Hadj. Sahraoui, *Photopyroelectric Calorimetry of Fe₃O₄ magnetic Nanofluids: effect of type of surfactant and magnetic field* **Int. J. Thermophys** Vol. 35, Issue 11, pp. 2032-2043 (2014)
24. **M. Streza**, D. Dadarlat, Y. Fedala and S. Longuemart *Depth estimation of surface cracks on metallic components by means of lock-in thermography* **Rev. Sci. Instrum.** – 84 (7):074902 (2013)
25. **M. Streza**, Y. Fedala, J. P. Roger, G. Tessier and C. Boue *Heat transfer modeling for surface crack depth evaluation* **Meas Sci Technol** 24 045602, doi:10.1088/0957-0233/24/4/045602 (2013)
26. D. Dadarlat, M. N. Pop, O. Onija, **M. Streza**, S. Longuemart, M. Depriester, A. Hadj Sahraoui, V. Simon, *Photopyroelectric (PPE) calorimetry of composite materials*, **J. Therm. Anal. Calorim** 111: 1129-1132 (2013)
27. D. Dadarlat, M. N. Pop, **M. Streza**, S. Longuemart, M. Depriester, A. Hadj Sahraoui, V. Simon *Combined FPPE-PTR Calorimetry Involving TWRC Technique II. Experimental – Application to Thermal Effusivity Measurements of Solids.* **Int. J. Thermophysics**, 32, 2092-2101 (2011)
28. N. M. Pop D. Dadarlat, **M. Streza**, V. Tosa *Photopyroelectric investigation of thermal effusivity of binary liquid mixtures by FPPE-TWRC method.* **Acta. Chim. Slov.** 58, 549-554 (2011)

29. **M. Streza**, D. Dadarlat, M N Pop, C. Prejmorean, D. Prodan, M. Depriester, S. Longuemart, A. Hadj Sahraoui *Photothermal radiometry (PTR) investigation of dynamic thermal parameters of dental composites* **Optoel. Adv. Mat.- Rapid Commun.**(OAM-RC), 4, 1830 (2010)
30. D. Dadarlat, · M. N. Pop, · **M. Streza**, S. Longuemart, M. Depriester, · A. Hadj Sahraoui, V. Simon *Combined FPPE calorimetry-PTR radiometry involving TWRC technique. Theory and mathematical simulations*, **Int. J. Thermophysics** 31: 2275-2282 (2010)
31. D. Dadarlat, **M. Streza**, M. N. Pop, V. Tosa, S. Delenclos, S. Longuemart, A. Hadj Sahraoui *Photopyroelectric calorimetry of solids. FPPE-TWRC method* J. Therm. Analysis Calor. 101, 397 (2010)
32. **M. Streza**, M. N. Pop, K. Kovacs, V. Simon, S. Longuemart, D. Dadarlat *Thermal Effusivity Investigations of Solid Materials by Using the Thermal-Wave- Resonator-Cavity (TWRC) Configuration. Theory and Mathematical Simulations*. **Laser Physics**, vol. 19, 6, 1340 (2009)
33. D. Dadarlat, C. Neamtu, **M. Streza**, C. Socaciu, C. Bele, F.V. Dulf *Highly accurate photopyroelectric investigation of thermal diffusivity of vegetable oils* **European Journal of Lipid Science and Technology**, 111, 148- 154 (2009)
34. **M. Streza**, D. Dadarlat, C. Socaciu, C. Bele, F. Dulf, V. Simon *Photopyroelectric detection of vegetable oils' adulteration* **Food Biophysics**, vol. 4: 147-150 (2009)
35. D Dadarlat, C Neamtu, **M Streza**, R Turcu, I Craciunescu, D Bica and L Vekas *High accuracy photopyroelectric investigation of dynamic thermal parameters of Fe_3O_4 and $CoFe_2O_4$ magnetic nanofluids* **Journal of Nanoparticle Research**, 10, 1329-1336 (2008)
36. D. Dadarlat, C.Neamtu, **M. Streza**, D. Chicea, A. Pasca *High Accuracy Photopyroelectric Investigations of Dynamic thermal Parameters of Fluids* **J. Optoel. Adv. Mat**, Vol. 10, Nr. 2, p.284-287 (2008)
37. **M. Streza**, V. Simon, C. Neamtu, D. Dadarlat *High Accuracy PPE Calorimetry. Application to Liquid Mixtures and Compozites* **J. Optoel. Adv. Mat.** , vol9, nr. 3, p. 595-598 (2007)
38. D. Dadarlat, C. Neamtu, V. Tosa, **M. Streza** *Accurate Photopyroelectric Calorimetry Applied to Isotopic Liquid Mixtures* **Acta. Chim. Slov.**,54, 149-153 (2007)
39. Anna Sikorska, D. Dadarlat, B.B.J.Linde, **M. Streza**, C. Neamtu, A. Śliwinski *Photoacoustic and photopyroelectric investigations of thermal parameters in water mixed with organic liquids* J. Phys. IV, 137, 341 (2006)

40. D. Dadarlat, **M. Biczazan**, A. Frandas *Photopyroelectric Measurements of Thermal Parameters in Margerines. The influence of Water Content*. Instr. Sci.@Tech. 25, 235 (1997)

Patents

- 1. Method for evaluating depth of crack near surface of metallic material, involves heating area located near crack, and determining depth of crack based on value of heat diffusion length at intersection of variation areas**
French Patent Application No.1258940, CNRS-UPMC (2013)
Inventors: Christine Boue, Gilles Tessier, Jean-Paul Roger, Mihaela Streza
- 2. Adhesive system applicable in restorative dentistry in combination with materials belonging to the classes of giomers, composites and ionomer cements which are light-polymerisable**
Patent Number(s): RO130609-A2
Inventor(s): Prejmerean C, Moldovan M, Buruiana T, Prodan D, Silaghi D L, Sarosi C L, Furtos G, Boboia S, Hodisan I, Colceriu B A L, Streza M, Agapescu C (2014)

Proceedings

- 1. Thermophysical analysis of II-VI semiconductors by PPE calorimetry and lock-in thermography**
M. Streza, K. Strzałkowski, D. Dadarlat
AIP Conference Proceedings 1565, 156 (2013)
- 2. On the sensitivity of FPPE-TWRC method in thermal effusivity investigations of solids**
D. Dadarlat, M. Streza, M. N. Pop, V. Tosa
J. Phys-Conf. Series, 182, 012023 (2009)
- 3. Calorimetric investigations of solids by combined FPPE-TWRC method**
D. Dadarlat, M. Streza, M. N. Pop, V. Tosa, S. Delenclos, S. Longuemart, A. Hadj Sahraoui
J. Phys-Conf. Series, 214, 012056 (2010)

Publications non-ISI

- 1. Microwave degradation of sunflower oil. Complementary study by photopyroelectric and infrared spectroscopy, gas chromatography and fluorescence.**
I. Bros, M. Streza, M.L. Soran, V. Surducan, E. Surducan, I. Bratu, R. Pop, C. Neamtu, D. Dadarlat
Proceeding of the International Conference „Agricultural and Food Sciences, Processes and Technologies” (International Conference „Agricultural and Food Sciences,

Processes and Technologies”, Third edition, Sibiu, April 26-27, 2007), **2007**, 5-12; ISSN 1843-0694

2. Photothermal methods applied for investigation of early spoilage of some vegetable oils

M. Streza, I. Bros, M.L. Soran, V. Surducun, E. Surducun, I. Bratu, I. Kacso, S.I. Farcas, C. Neamtu, D. Dadarlat

Proceeding of the International Conference „Agricultural and Food Sciences, Processes and Technologies” (International Conference „Agricultural and Food Sciences, Processes and Technologies”, Third edition, Sibiu, April 26-27, **2007**, 83-90; ISSN 1843-0694

3. Thermal diffusivity investigations of some dental materials by using photopyroelectric calorimetry

M. Streza, D. Dadarlat, V. Simon, C. Prejmerean, L. Silaghi-Dumitrescu

Journal of Optoelectronic and Advanced Materials-Symposia, vol. 1 (1), 70-73 (**2009**)

4. Investigation of thermal effusivity of thin solids in a layered system. FPPE-TWRC approach

M N Pop, **M. Streza**, D. Dadarlat, V. Simon

Studia Univ. Babes-Bolyai, Physica, LV, 1, 145 (**2010**)

Conferences

1. ADHESION STUDIES OF DENTAL SEALANTS TO ENAMEL BY USING OPTICAL MICROSCOPY AND LOCK-IN INFRARED THERMOGRAPHY

M. Streza^{1*}, D. Prodan², I. Hodisan³, S. Boboia², C. Prejmerean²

Advanced infrared technology and Application, 29.09-02.10 2015 Pisa, Italy

2. Lock-in thermography versus dye penetration testing and SEM for in vitro adaptation of smart dental restorative materials (giomers) to the walls of the cavity

M. Streza, D. Dadarlat, I. Hodisan, C. Prejmerean, C. Boue

12th International Conference on Quantitative Infrared Thermography 7-11 July 2014, Bordeaux, France

3. Infrared lock-in thermography for surface defect imaging in metals for industrial diagnosis

M. Streza, Y. Fedala, J-P Roger, G. Tessier, C. Boue

12th International Conference on Quantitative Infrared Thermography 7-11 July 2014, Bordeaux, France

4. Photothermal Investigation of Polymerization Processes of some Resin-based Dental Materials

D. Dadarlat, M. Streza, D. Prodan, M. Moldovan, C. Prejmerean

IC-ANMBES, Brasov, June 13-15, 2014

5. Polymerization studies of giomers and evaluation of the interface between the tooth and filling using photothermal methods

M. Streza, D. Dadarlat, M. Moldovan, D. Prodan, C. Prejmerean

2nd Conference on Photoacoustic and Photothermal Theory and Applications (CPPTA), Warsaw, Poland, Sept. 23-26, 2014

6. Discussion on optimal coupling medium and its thickness in photopyroelectric calorimetry

K. Strzałkowski, D. Dadarlat, M. Streza, A. Marasek

2nd Conference on Photoacoustic and Photothermal Theory and Applications (CPPTA), Warsaw, Poland, Sept. 23-26, 2014

7. A New Photothermal Calorimetry: the Photothermoelectric (PTE) Technique

D. Dadarlat M. Streza, M. Kuriakose, M. Depriester, A. Hadj Sahraoui

42th Winter School on Wave and Quantum Acoustics, Szczyrk, Poland, 25 Feb-01 March, 2013

8. Photopyroelectric Calorimetry of Magnetic Nanofluids. Effect of Type of Surfactant and Magnetic Field.

D. Dadarlat S. Longuemart , R. Turcu , M. Streza , L. Vekas , A. Hadj Sahraoui

42th Winter School on Wave and Quantum Acoustics, Szczyrk, Poland, 25 Feb-01 March, 2013

9. Crack depth evaluation by infrared lock-in thermography

M. Streza , D. Dadarlat S. Longuemart

42th Winter School on Wave and Quantum Acoustics, Szczyrk, Poland, 25 Feb-01 March, 2013

10. Preparation and thermal characterization (by photopyroelectric calorimetry) of a new type of giomers. Comparison with commercially available materials.

L. Silaghi-Dumitrescu, D. Dadarlat, M. Streza, T. Buruiana, M. Moldovan, C. Prejmerean

Central and Eastern European Conference for Thermal Analysis and Calorimetry (CEEC-TAC2), Vilnius, Lithuania, 27 – 30 Aug. 2013

11. Synthesis and characterization of the hydroxyapatite and doped hydroxyapatite powders, as parts of the inorganic phase of an experimental endodontic sealer.

D. Prodan, I. Kacso, D. Dadarlat, M. Streza

Central and Eastern European Conference for Thermal Analysis and Calorimetry (CEEC-TAC2), Vilnius, Lithuania, 27 – 30 Aug. 2013

12. Lock-in thermography vs. dye penetration method and SEM for in vitro study of marginal integrity between a giomer system and dental tissues

I. Hodosan, S. Boboia, C. Prejmerean, L. Colceriu, D. Dadarlat, I. Kacso, M. Streza

Central and Eastern European Conference for Thermal Analysis and Calorimetry (CEEC-TAC2), Vilnius, Lithuania, 27 – 30 Aug. 2013.

13. Complementary photothermal techniques for complete thermal inspection of solids

D. Dadarlat, M. Streza, O. Onija, K. Strzalkowski, C. Prejmerean, D. Prodan, L. Silaghi-Dumitrescu, N. Cobirzan
Conference on Photoacoustic and Photothermal Theory and Applications (CPPTA), Varsovia, Polonia, 25-27 Sept. 2013.

14. Measurement of the thermal parameters of selected II-VI crystals by means of photopyroelectric methods and infrared lock-in thermography

K. Strzalkowski, D. Dadarlat, M. Streza, A. Marasek
Conference on Photoacoustic and Photothermal Theory and Applications (CPPTA), Varsovia, Polonia, 25-27 Sept. 2013.

15. Combined FPPE-PTR calorimetry involving TWRC technique

D. Dadarlat, M. Streza, M.N.Pop, S. Longuemart, M. Depriester, A.H. Sahraoui
39 Winter School on Wave and Quantum Acoustics, Szczryk, Poland, Feb. 2010

16. Photopyroelectric investigation of thermal effusivity of binary liquid mixtures by FPPE-TWRC method

D. Dadarlat, M. Streza, M. N. Pop
15-th Photoacoustics and Thermal Waves Methods, Szczryk, Poland, March, 2010

17. Photothermal radiometry determination of dynamic thermal parameters of dental composites

M. Streza, D. Dadarlat, M. N. Pop, C. Prejmerean, D. Prodan, M. Depriester
CNF Iasi, sept. 2010

18. Calorimetric investigation of liquids by combined FPPE configuration and TWRC method

D. Dadarlat, M. Streza, M.N.Pop, V. Tosa
15th Int. Conf. on Photoacoustic and Photothermal Phenomena, Leuven, Belgium, 19-23 July, 2009

19. Photothermal studies of some dental filling materials

M. Streza, D. Dadarlat, M.Pop
38 Winter School on Wave and Quantum Acoustics, Korbielow, Poland, Feb. 2009

20. Thermal Effusivity Investigations of Solid Materials by Using the Thermal-Wave-Resonator-Cavity (TWRC) Configuration. Theory and Mathematical Simulations.

M. Streza, M. N. Pop, K. Kovacs, V. Simon, S. Longuemart, D. Dadarlat
Advanced Laser Technology-08, September 13-18, Siofok, Hungary 2008

21. High Accuracy Photopyroelectric Investigation of Vegetable Oils' Quality, Early Spoilage and Adulteration

M. Streza, D. Dadarlat, C. Neamtu, M.N. Pop, V. Simon

Advanced Laser Technologies, September 13-18, Siofok, Hungary 2008

22. Thermal diffusivity investigations of some dental materials by using photopyroelectric calorimetry

M. Streza, D. Dadarlat, V. Simon, C. Prejmerean, L. Silaghi Dumitrescu

The 5 th Conference on Condensed Matter Physics, TIMISOARA, 16-18 iulie 2008

23. PPE investigation of new dental filler composites

V. Simon, **M. Streza**, D. Dadarlat, M. Pop, C. Prejmerean, L. Silaghi-Dumitrescu

Advanced Spectroscopies on Biomedical and Nanostructured Systems Cluj-Napoca, sept. 7-10, 2008

24. High precision measurements of thermal effusivity by photopyroelectric detection -experimental considerations

C. Neamtu, D. Dadarlat, **M. Streza**, V. Simon

Isotopic and molecular processes, Cluj-Napoca 2007

25. Sunflower oil degradation - study by high-performance liquid chromatography and accurate photopyroelectric calorimetry

M. Streza, I. Broș, M.L. Soran, J. Leistner, N. Dădârlat, C. Neamtu

Isotopic and molecular processes, Cluj-Napoca 2007

26. Application of Photopyroelectric Techniques, Together with Classical Ones for Characterization of some Vegetable Oils

M. Streza, C. Neamtu, D. Dadarlat, V. Simon, C. Socaciu, C. Bele, F. Dulf

5th Euro Fed Lipid Congress, Gothenburg, Sweden 2007

27. Vegetable Oils Analysis by Gas Chromatography Coupled With Mass Spectrometry

I. Bros, **M. Streza**, M.L. Soran, Z. Moldovan, D. Dadarlat

5th Euro Fed Lipid Congress, 16-19 septembrie 2007, Gothenburg, Sweden

28. High Accuracy Photopyroelectric Investigations of Dynamic thermal Parameters of Fluids

D. Dadarlat, C. Neamtu, **M. Streza**, D. Chicea, A. Pasca

IBWAP-2007, Constanta, 2007

29. Determination of oil adulteration by gas chromatography and photopyroelectric method

M. Streza, I. Broș, M.L. Soran, F. Tușa

19-th National Chemistry Conference, Calimanesti, 4-6 oct 2006.

30. High Accuracy PPE Calorimetry Application to Liquid Mixtures and Composites

M. Streza, V. Simon, C. Neamtu, D. Dadarlat
NANOSPEC, Cluj-Napoca, 3-6 sept. 2007

31. Photoacoustic and photopyroelectric investigations of thermal parameters in water mixed with organic liquids

Anna Sikorska, D. Dadarlat, B.B.J.Linde, **M. Streza**, C. Neamtu, A. Śliwinski
11-th Winter Workshop on Photoacoustics and Thermal Wave Methods, Ustron, Poland, 2006

32. Molecular and Isotopic Associations Investigated by Photopyroelectric Calorimetry

D. Dadarlat, C. Neamtu, X. Filip, **M. Streza**, A. Hadj Sahraoui, S. Longuemart
GRG Conference, Trieste, 2005