Dimitrios Kouzoudis

2 September 2021

Chemical Engineering Department

University of Patras

Patras, Greece

Email: kouzoudi@upatras.gr

Employment:

University of Patras

Department of Chemical Engineering
School of Engineering
Rio, 26504 Patra, Greece

Associate Professor September 2017 – Today

Conducted research on the use of magnetoelastic sensors to real applications such as the detection and localization of single transverse damage cracks on mechanical structures such as cantilever beams; the use of these sensors to detect as high as nine bending modes; Also used sensing data from previous work to extract the diffusion coefficient of different zeolites under the adsorption of different gasses. Full characterization of these sensors concerning sensing parameters such as sensitivity, selectivity, reproducibility, quality factor, frequency response etc. Taught “Material Science” , “Materials for Environmental Applications” (elective), Physics Lab and Physics courses to Chemical Engineering students and General Physics to Civil Engineering students. Also translated and edited two academic books entitled “Engineering Materials I” and “Engineering Materials II” by David R. H. Jones and Michael F. Ashby.

Assistant Professor September 2014 – September 2017

Conducted research on the microfabrication of zeolite films on magnetoelastic sensors by electron-beam lithography. Studied the effects of the gas adsorption on the internal stress of zeolite membranes. Developed a new model for the calculation of the impedance of magnetoelastic thin films under resonance conditions. Designed a high frequency magnetic field for the study of the effects of hyperthermia on cancer cells. Taught Physics Lab and Physics I (Mechanics & Waves) and Physics II (Electromagnetism & Optics) to Chemical Engineering students and Physics (Thermodynamics, Electromagnetism & Optics) to Civil Engineering students. Authored two academic books entitled "Physics I" and "Physics II"

Higher Colleges of Technology (sabbatical)

Engineering Technology Department
Al Ain Colleges
17258, Al Ain,
United Arab Emirates

Assistant Professor August 2012 – July 2014

Taught Math III for Engineers and Physics I and II courses (listed as EGEN N301 and Physics 1103 and 1203 correspondingly to the program of study). Developed and utilized various educational technology resources to ensure that effective and innovative instruction methodologies are employed. Applied strategies to ensure effective student learning is achieved within a second language environment, providing continuous feedback on student progress through a variety of assessment tools, including tests, projects, assignments and other evaluation instruments. Supported and mentored students during internships and work placements. Maintained regular office hours in order to advise and assist students. Provided input to program and course reviews and made recommendations based on consultations with colleagues and external agencies such as business, industry and schools.

University of Patras

Department of Engineering Sciences
School of Engineering
Rio, 26504 Patra, Greece

Assistant Professor September 2005 – August 2012

Conducted research on the design and the development of remote-query magnetoelastic sensors for monitoring of environmental / chem / bio parameters, such as gas concentration, small mass loads, pressure, flow velocity, humidity, and precipitation of biological salts in aqueous solutions, blood coagulation time, and glucose concentration. Worked on photolysis of water with titanium-oxide nanotubes. Taught Physics courses and laboratories to Engineering students.

Overall teacher evaluation rating ≈ 3.8/4.0.

University of Patras

Department of Materials Science, Patra, Greece

Adjunct Professor September 2003 – August 2004

Taught courses on Electronics and Semiconductor Materials to freshman and sophomore students of Dept. of Materials Science. Conducted research on properties of magneto-elastic sensors.

American College ACT

School of Business, Thessaloniki, Greece

Adjunct Professor September 2002 – August 2003

Taught computer courses to freshman students of Dept. of Economics. Supervised examinations, followed-up student projects, used electronic means and software such as MathCad and Mathematica for better comprehension of lectures from the students.

Institute of Professional Training "Pythagoras"
Thessaloniki, Greece

Computer Trainer & System Administrator September 2002 – August 2003

Taught courses on C/C++, Visual Basic 6.0, VBScript, and Web Development. Administered the Institute's TCP/IP Intranet consisted of approximately a hundred Windows 2000 nodes at the student labs. Set up an e-commerce ASP application on a educational IIS server.

Greek Military
Greece

Mandatory Military Service *May* 2001 – September 2002

New Age Technologies
Louisville, Kentucky, U.S.A.

Consultant May 2000 – May 2001

Offered consulting services to Kindred HealthCare and Sprint Telecommunications for the maintenance and operation of a large data acquisition software for healthcare diagnostics.

University of Kentucky, Electrical Engr. Dept
Lexington, Kentucky, U.S.A.

Research Scientist January 1999 – May 2000

Conducted research on magneto-elastic sensor materials for monitoring different environmental conditions such as pressure, humidity, fluid-flow velocity, glucose concentration and phase transitions. Developed micro-scale patterns on sensors using microfabrication and clean room techniques. Measured the dielectric properties of carbon nanotube materials in the 0.5 – 5.5 GHz range. Developed programming codes for data modeling. Supervised a team of post-doctoral and graduate students. Operated, built and maintained laboratory equipment. Responsible for inventory management. Evaluated literature to gain insight on current methods as well as adapting these procedures to ongoing work. Wrote manuscripts for publication in peer reviewed journals.

Ames Laboratory, US Department of Energy
Ames, Iowa, U.S.A.

Research Assistant - Employee August 1994 – December 1998

Fabricated and processed new materials in thin films by DC/RF magnetron sputtering, thermal evaporation, and glow discharge oxidation. Operated Scanning Electron Microscope to study interfaces in superconducting materials. Performed electromagnetic and thermodynamic measurements on various physical systems. Designed a low temperature He cryostat. Troubleshot and repaired various experimental instruments and electronic devices. Programmed GPIB interfaces for remote data-acquisition Characterized materials using x-rays, JCPDF database, Electron Dispersive Spectroscopy, profilometry, electrical resistivity, and optical microscopy. Performed data fit on theoretical models.

Physics Department
Iowa State University, Ames, Iowa, U.S.A.

Teaching Assistant August 1992 – July 1994

Taught introductory physics courses. Graded homework, quizzes, and exams. Tutored students in help rooms.

National Research Institute "Democretos"

Athens, Greece

Graduate Student May 1991 – July 1992

Attended graduate courses and worked as a lab assistant at the "Lab of Superconductivity and Magnetic Materials" of Professor D. Niarchos.

Education:

Iowa State University, USA 1998
Ph.D. on Physics
Title: "Influence of a perpendicular magnetic field on the thermal depinning of an Abrikosov vortex in a superconducting Josephson junction".

Iowa State University, USA 1994
M.S. on Physics/Materials Science
Title: "Recrystalization of high temperature superconducators".

University of Ioannina, Greece 1990
B.S. on Physics

Editing:

***Editorial Board*, "Sensors"**

https://www.mdpi.com/journal/sensors/sectioneditors/physicalsensors

2019 – present, **"Sensors"**, a peer-review scientific journal, with impact factor: 3.031 (2018) ; 5-Year Impact Factor: 3.302 (2018), which publishes state of the art research on the science and technology of sensors and biosensors. CiteScore (2018 Scopus data): 3.72; ranked 9/123 in 'Physics and Astronomy: Instrumentation' and 102/661 in 'Electrical and Electronic Engineering'.

***Editor-in-chief*, "Sensor Letters"**

2008-2013 **"Sensor Letters"**, a peer-review scientific journal, with impact factor 1.6 (2007 rating), which publishes state of the art research on the interdisciplinary field of sensors and sensor technology.

Diploma Thesis Supervision:

2017-2020	Ph.D. (completed) supervision of Georgios Samourgkanidis, Chem. Engineering Department, “Experimental study and characterization of magnetoelastic ribbons as vibration sensors and their application for the identification of cracks in cantilever beams through the dynamic behavior of the beam”
2020-today	Undergraduate thesis, Theodoros Aggelopoulos, “Experimental study of the natural frequencies of 3-D printed beams using magneto-elastic vibration sensors”
2020-today	Undergraduate thesis, Andreas Ioannou, “Automation of a electro-plating production line”
2020-today	Undergraduate thesis, Haris Rizeakos, “Construction of a controlled mass flow system for the testing of gas concentration sensors”
2019-2020	Undergraduate thesis, ERASMUS + TRAINEESHIP MOBILITY Wisam Élkafarna, Kocaeli University – University of Patras,
2018-2019	Undergraduate thesis, Konstantinos Spiliotopoulos, "Recording of magnetic nanoparticle temperatures in aqueous solutions during hyperthermia"
2017-2018	Undergraduate thesis, Panagiotis Moulagiannis, "Repair of micro-groove types of defects on magnetic surfaces"
2016-today	Co-supervision of international Ph.D. thesis of Ariane Sagasti - University of the Basque Country, Erasmus + visitor
2012-today	Ph.D. supervision of Vasiliki Tsoukala, Chem. Engineering Department
2015-17	M.S. (completed), Giorgos Samourganides, “Study of structural deformations on stationary and rotatin aluminum blades by the use of magnetoelastic sesnors” Chem. Engineering Department

2007-11 Ph.D. (completed), Thodoris Baibos, “Synthesis of zeolitic films on magnetoelastic ribbons, for the detection of volatile organic compounds (VOC's) and the determination of sorption-induced mechanical properties of the film”, Chem. Engineering Department

2007-8 Undergraduate thesis (completed), Kapsalis Ioannins, "Study of Mechanical Properties of Aluminum Bars with the Help of magnetoelastic sesnors", Material Sciences Dept., University of Patras, Greece, parts 1 and 2.

2010-11 Undergraduate thesis (completed), Thanos Karavoulias, “Influence of high frequency magnetic fields on hypethermia of magnetic fluids with iron oxide nanoparticles”, Physics Dept., University of Patras, Greece, parts 1 and 2.

2010-11 Undergraduate thesis (completed), Dimitris Zografos,"Sending commands and receiving data over a wired communication between an electromagnetic resonance experiment and a PC running Windows via programming language C", Dept. of Computer Engineering & Informatics, University of Patras, Greece.

Teaching Graduate Courses:

2008 “Special topics on Applied Physics: Theory of Superconductivity”, Spring semester, University of Patras, Dept. of Engineering Sciences.

2017 “SEM microscopy principles”, Fall Semester via Erasmus+ Staff Mobility for Teaching, University of the Basque Country UPV/EHU - Department of Electricity & Electronics (weekly graduate course)

2018 “SEM microscopy principles”, Fall Semester via Erasmus+ Staff Mobility for Teaching, University of the Basque Country UPV/EHU - Department of Electricity & Electronics (weekly graduate course)

Lab Design and Built

At University of Patras, I was part of a three-member team responsible for for the design, implementation, and oversight of the Electron Beam Nano-Lithography Lab in University of Patras. The team was consisting by D. Kouzoudis, P. Kounavis and C. Christides, all faculty of the Engineering Sciences Dept. The Laboratory Specifications are as follows:

• Scanning Electron Microscope (SEM) with source LaB_6, complete with an electron beam lithography (EBL)

• SEM: accelerating voltage 30 kV, resolution 3 nm, magnification x 300.000, a beam current of 1 pA – 1 μA, with a 5-axis XYZRT base, with optional low vacuum observation of non-conductive samples.

• EBL: Generator nanostructures from PC with basic shapes, resolution 20 nm, recording speed 10 MHz, based laser 2 axles, cutoff time 25 nsec, maximum coverage of 100 x 100 mm, stitching error 10nm.

• Photoresist Spin Coater

• Gold sputtering

(please also check http://www.des.upatras.gr/Nanolab/welcome.html):

Patents:

2002 L. Bachas, G. Barrett, C. A. Grimes, **D. Kouzoudis**, S. Schmidt, "Magnetoelastic Sensor for Characterizing Properties of Thin-Film/Coatings." U.S. Patent No. 6688162, issued Feb. 10, 2004.

2004 C.A. Grimes, P.G. Stoyanov, **D. Kouzoudis**, U.S. Patent 6393921. "Magnetoelastic Sensing Apparatus and Method for Remote Pressure Query of an Environment".

Books:

2015 Authored academic book entitled “Physics I”, publisher “Symmetria”, Eudoxus code 50659840

2015 Authored academic book entitled “Physics II”, publisher “Symmetria”, Eudoxus code 50659843

2011 Authored academic notes entitled “Thermodynamics for Engineers”, no publisher, Eudoxus code 13003965

2011 Authored academic notes entitled “Physics Lab I”, no publisher, Eudoxus code 12867810

2011 Authored academic notes entitled “Physics Lab II”, no publisher, Eudoxus code 12951260

2005 Translation from US English to Greek:
“Principles and Applications of Electrical Engineering”, Rizzoni. 3rd edition

http://www.mhhe.com/engcs/electrical/rizzoni/

Invited Departmental Seminars:

2015 University of the Basque Country, - Basque Center of Materials,
http://www.bcmaterials.net/prof-dimitris-kouzoudis-visited-bcmaterials

2006 University of Patras, Department of Materials Science
Title: "Magnetoelastic Sensors – technology and Applications"
Invited by: Professor D. Photinos

Funded Proposals:

Joint Research and Technology Programs (Greece – Non-European countries), "Fabrication, characterization and testing of a nanostructured composite zeolite-metglas VOC/ odor sensor"
Duration: 2006-2008, Contribution: 60 k€
Partners: University of Minnesota, Department of Chemical Engineering & Materials Science
Role: Principal Investigator

FP6, Priority; CEU funded Specific Targeted Research Programme, "Design and Fabrication of Room Temperature, Remote Query, Carbon Dioxide Sensors",
Duration: 2005-2008, Contribution: 100 k€
Role: Participating Scientist

Greek Ministry of Education, Karatheodoris Program, "Study of the influence of gas adsorption on the elastic properties of thin zeolite layers",
Duration: 2010-2012, Contribution: 33 k€
Role: Principal Investigator

Greek Ministry of Development, Competitiveness and Entrepreneurship Program, National Strategic Reference Framework, "Development of Innovative Nanocarrier ixabebiloni and study of its applicability in the Treatment of Breast Cancer",
Duration: 2011-2013, Contribution: 100 k€
Role: Participating Scientist

Conference Co-Organizer:

Eurosensors XXV, 4-7 September, 2011, Athens, Greece.

5th International Zeolite Membrane Meeting (IZMM 2010), May 23rd and 26th 2010, Loutraki-Greece

Miscellaneous:

2017	"Thank you note" from "Sensors" journal for reviewer services, please see *Sensors* **2017**, *17*(1), 128; doi:10.3390/s17010128
2008	"Thank you note" from the "Journal of Physical Chemistry" for reviewer services.
2007	Best talk award in "1st Combined Hellenic – Austrian Congress in Foot and Ankle Disorders", Myconian Royal Hotel, Mykonos , Greece.
2002	Microsoft Certified Systems Engineer (MCSE).
2002	Cisco Certified Network Associate (CCNA).

Continuing Education On-Line Certificates:

2013	University of Pittsburgh course: "A look at Nuclear Science and Technology".
2013	University of Michigan course: "Introduction to Thermodynamics".
2014	MIT course 16.101x: "Introduction to Aerodynamics".

Referee to Scientific Journals (review date, journal, editor):

Mar 2021, Sensors, Bell Ding bell.ding@mdpi.com
Dec 2020, Physics Letters A, Luis Ghivelder pla@elsevier.com
July 2020, Sensors & Actuators: A. Physical, Yao-Joe Yang EviseSupport@elsevier.com

Dec 2019, Sensors, Rose Ma rose.ma@mdpi.com
May 2019, Sensors, Ms. Missy Wu missy.wu@mdpi.com
May 2019, Sensors & Actuators: B. Chemical, Dr. Zbigniew Brzozka zbrzozka@ch.pw.edu.pl
April 2019, Sensors, Ms. Missy Wu missy.wu@mdpi.com
Feb 2019, J. Magn. Magn. Materials, Atsufumi Hirohata atsufumi.hirohata@york.ac.uk
Dec 2018, Sensors & Actuators: B. Chemical, Dr. Zbigniew Brzozka zbrzozka@ch.pw.edu.pl
Feb 2018, Sensors & Actuators: A. Physical, P.J. French EviseSupport@elsevier.com
Nov 2017, Analytical Biochemistry, Ciara O' Sullivan eesserver@eesmail.elsevier.com
June 2017, ACS Sensors, Prof. NJ Tao tao-office@sensors.acs.org
May 2017, Metals, Mr. Kinsee Guo kinsee.guo@mdpi.com
Feb 2017, Analytical Chemistry, Dr. Frances Ligler
July 2016, Beilstein Journal of Nanotechnology, Thomas Schimmel
Jun 2016, Sensors, Caitlin Sheng
Nov 2015, Materials and Design, Arthur Geoffrey Gibson
Jul 2015, eXPRESS Polymer Letters, J. Karger-Kocsis
Jul 2015, Transactions on Magnetics – Conferences, Barbara Kaeswurm
Jan 2015, Sensors, Yanxin Zhang
Mar 2012, Radiation Measurements, Adrie J.J. Bos
Dec 2011, Int. Journal of Environmental Analytical Chemistry, Prof. Albaiges
Oct 2011, Int. Journal of Environmental Analytical Chemistry, Prof. Albaiges
Oct 2011, Energy & Fuels, Bob Weber
Sept 2011 - Oct 2011, Biosensors, Grace Lu
Jan 2011, Sensors (special issue: 10 Years Sensors), Ellen Lu,
Nov 2010, Sensors & Actuators: A. Physical, P.J. French
Aug 2010 Journal of Nanostructured Polymers and Nanocomposites, Prof. Galiotis
May 2010, Sensors & Actuators: B. Chemical, Ramaier Narayanaswamy
May 2010, Sensors & Actuators: A. Physical, P.J. French
Jan 2010, Biomaterials, Peggy O'Donnell
Jul 2009, Langmuir, Tejal A. Desai
Feb 2009, Electrochemistry Communications, Tomasz Gromelski
Feb 2009, ACS Applied Materials & Interfaces, Kirk S. Schanze
Jan 2009, Crystal Growth & Design, Allan S. Myerson
Dec 2008, Sensors, Kathy Lai
Nov 2008, Electrochemistry Communications, R. Compton
Oct 2008, Sensors & Actuators: B. Chemical, Ramaier Narayanaswamy
Nov 2008, Sensors & Actuators: B. Chemical, Zbigniew Brzozka
Sept. 2008, Journal of Materials Science, Amiee A. DeSouza
Jun 2008, Inorganic Chemistry, Kenneth R. Poeppelmeier
Jun 2008, Solar Energy Materials & Solar Cells, Greg P. Smestad
Mar 2008, Bioelectrochemistry, Rolando Guidelli
Mar 2008, The Journal of Physical Chemistry, Prashant Kamat
Jan 2008, Sensors & Actuators: B. Chemical, Ramaier Narayanaswamy
Oct 2006, Thin Solid Films, Brigitte Hayeur / Manon Fournier

Jul 2007, Journal of Physical Chemistry, Harriet Bradham
Apr 2007, Sensors & Actuators: B. Chemical, Ramaier Narayanaswamy
Mar 2007, Thin Solid Films, Brigitte Hayeur / Manon Fournier
Oct 2006, The Journal of Physical Chemistry, Svetla Tzvetkova
Sep 2006, Analytical Chemistry, Reinhard Niessner
Oct 2006, Sensors & Actuators: B. Chemical, J. Banjac
Aug 2006, Sensors & Actuators: A. Physical, L. Lin
Jul 2006, Journal of Physical Chemistry, Christa Trok
Jun 2006, Biosensors & Bioelectronics, Anthony P.F. Turner
Apr 2006, Journal of Materials Science, K. Chattopadhyay
Mar 2006, Biosensors & Bioelectronics, Anthony P F Turner / Alice X J Tang
Oct 2005, Thin Solid Films, Brigitte Hayeur, Manon Fournier
Nov 2005, Biosensors & Bioelectronics, Alice Tang
Dec 2005, The Journal of Physical Chemistry, Arthur J. Nozik
May 2005, Journal of Photochemistry and Photobiology A, Russ Schmehl
Feb 2005, Biosensors & Bioelectronics, Alice Tang

International Conference Presentations

1.	V. Tsukala, **D.Kouzoudis**, "Development of micro zeolite LTA sensors of LTA zeolite micro-membranes on a magnetoelastic substrate via Electron Beam Lithography", 10th Panhellenic Conference of Chemical Engineering, Patra, Greece, June 4-6
2.	**D.Kouzoudis**, T.Baimpos, V.Nikolakis, INVITED TALK,*"Zeolite Thin Films as Chemically Active Layers for Sensing Applications",* International Conference on Management, Manufacturing and Materials Engineering (ICMMMMm 2011), Zhengzhou, China, December 9-11, 2011
3.	**D.Kouzoudis**, T.Baimpos, V.Nikolakis, *"The selective detection of dangerous VOC's using zeolite/Metglas magnetoelastic sensors",* Eurosensors XXV, Athens, Greece, 4-7 September, 2011.
4.	V.Nikolakis, **D.Kouzoudis**, T.Baimpos, INVITED TALK,*"The use of zeolite/magneto-elastic sensors to detect Volatile Organic Compounds",* International Conference for Material Application for Sensors and Transducers, IC-MAST 2011, Kos, Greece, 13-17 May 2011.

5.	V.Nikolakis, T.Baimpos, **D.Kouzoudis**, "Measuring the Adsorption Induced Strain of Zeolite Membranes Using Magnetoelastic Sensor", AIChe Annual Meeting Salt Palace Convention Center Salt Lake City, UT, 7-12 November, 2010.
6.	**D.Kouzoudis**, V.Nikolakis, T.Baimpos, *"The use of magneto-elastic sensors to study the elastic properties of thin zeolite films"*, 8th European Conference on Magnetic Sensors and Actuators, (EMSA), Bodrum, Turkey, 4-7 July, 2010.
7.	T.Baimpos, **D.Kouzoudis**, L.Gora, V.Nikolakis, "Measuring the effect of adsorption on zeolite film mechanical properties using magnetoelastic sensors", 5th International Zeolite Membrane Meeting, Loutraki, Greece, 23-26 May, 2010.
8.	V.Nikolakis, T.Baimpos, **D.Kouzoudis**, "Detection of Volatile Organic Compounds (VOC's) using zeolite –Metglas composite sensors", 3rd International Symposium Advanced Micro and Mesoporous Materials, Albena resort, Bulgaria, 6-9 September, 2009.
9.	T.Baimpos, V.Nikolakis, **D.Kouzoudis**, "Measurement of the elastic properties of zeolite films using Metglas-zeolite composite sensors", Zeolites and Related Materials: Trends, Targets and Challenges Proceedings of 4th International FEZA Conference, Paris, France, 2-6 September, 2008.
10.	L.Góra, J.Kuhn, T.Baimpos, **D.Kouzoudis**, V.Nikolakis, F.Kapteijn, *"Monocrystal-thin b-oriented silicalite-1 layer-Metglas assembly for selective sensor application",* 10th International Conference on Inorganic Membranes (ICIM10) Tokyo, Japan, 18-22 August, 2008.
11.	I.G.Giannakopoulos, T.Baimpos, **D.Kouzoudis**, V.Nikolakis, *"Sensing of hydrocarbons and VOC's using zeolite –Metglas composite sensors"*, 4th International Zeolite Membrane Meeting, Zaragoza, Spain, 23-27 July, 2007.
12.	**D. Kouzoudis**, E. Panagiotopoulos E., S. Marangos, C. Matzaroglou, "1st Combined Hellenic – Austrian Congress in Foot and Ankle Disorders", 21-23 Sept. 2007, Mykonos, Greece.
13.	I.G.Giannakopoulos, T.Baimpos, **D.Kouzoudis**, V.Nikolakis, *"Synthesis of faujasite-Metglas composite films for gas sensing application"*, 9th Int. Conf. On Inorganic Membranes, Lillehammer, Norway, 25-29 June, 2006.

Publication List:

Publications: 45, Citations: 1407, h-index: 19 (Scopus)

1.	**Kouzoudis, D**., Samourgkanidis, G., Kolokithas-Ntoukas, A., Zoppellaro, G., Spiliotopoulos, K., "Magnetic Hyperthermia in the 400–1,100 kHz Frequency Range Using MIONs of Condensed Colloidal Nanocrystal Clusters", Frontiers in Materials, 2021, 8, 638019
2.	**D. Kouzoudis**, G. Samourgkanidis, C. I. Tapeinos, "Contactless Detection of Natural Bending Frequencies using Embedded Metallic-Glass Ribbons inside Plastic Beams made of 3-D Printing", Recent Progress in Materials 2021; 3(1), doi:10.21926/rpm.2102010
3.	**Kouzoudis, D**., Baimpos, T., Samourgkanidis, G., A new method for the measurement of the diffusion coefficient of adsorbed vapors in thin zeolite films, based on magnetoelastic sensors, Sensors (Switzerland), 2020, 20(11), pp. 1–13, 3251
4.	Samourgkanidis, G., **Kouzoudis, D**., "Characterization of magnetoelastic ribbons as vibration sensors based on the measured natural frequencies of a cantilever beam", Sensors and Actuators, A: Physical, 2020, 301, 111711
5.	Samourgkanidis, G., **Kouzoudis, D**., "A pattern matching identification method of cracks on cantilever beams through their bending modes measured by magnetoelastic sensors", Theoretical and Applied Fracture Mechanics, 2019, 103, 102266
6.	Lopes A.C, Sagasti A., Lasheras A., Muto V, Gutierrez J., Kouzoudis D., Barandiaran J.M., "Accurate determination of the Q quality factor in magnetoelastic resonant platforms for advanced biological detection", Sensors (Switzerland), 2018, 18(3), 887
7.	G. Samourgkanidis, **D. Kouzoudis**, "Experimental detection by magnetoelastic sensors and computational analysis with finite elements, of the bending modes of a cantilever beam with minor damage", (2018) Sensors and Actuators A: Physical, 276 (2018) 155–164
8.	A., Sagasti, N., Bouropoulos, **D.**, **Kouzoudis**, A., Panagiotopoulos, E., Topoglidis and J., Gutiérrez, "Nanostructured ZnO in a Metglas/ZnO/Hemoglobin Modified Electrode to Detect the Oxidation of the Hemoglobin Simultaneously by Cyclic Voltammetry and Magnetoelastic Resonance", Materials, Volume 10, Issue 8, July 2017, Page 849.

9.	**Kouzoudis, D**., Nikolakis, V., “The use of a non-linear model for a more realistic calculation of the "ΔE effect" in magnetoelastic ribbons”, Journal of Magnetism and Magnetic Materials, Volume 395, 24 July 2015, Pages 59-66
10.	Zoppellaro, G., Kolokithas-Ntoukas, A., Polakova, K., Tucek, J., Zboril, R., Loudos, G., Fragogeorgi, E., Diwoky, C, Tomankova, K, Avgoustakis, K, **Kouzoudis, D**, Bakandritsos, A., “Theranostics of epitaxially condensed colloidal nanocrystal clusters, through a soft biomineralization route”, Chemistry of Materials, Volume 26, Issue 6, 25 March 2014, Pages 2062-2074
11.	Tsukala, V., **Kouzoudis, D.**, “Zeolite micromembrane fabrication on magnetoelastic material using electron beam lithography”, Microporous and Mesoporous Materials, Volume 197, October 2014, Pages 213-220
12.	T. Baimpos, L. Gora, V. Nikolakis, and **D. Kouzoudis**, “Selective detection of hazardous VOCs using zeolite/Metglas composite sensors”, Sensors and Actuators, A: Physical, Volume 186, October 2012, Pages 21-31.
13.	T. Baimpos, V. Tsukala, V. Nikolakis, and **D. Kouzoudis**, “A Modified Method for the Calculation of the Humidity Adsorption Stresses Inside Zeolite Films Using Magnetoelastic Sensors”, Sensor Lett. 10, 878-884 (2012)
14.	T. Baimpos, V. Nikolakis, and **D. Kouzoudis**, “A new method for measuring the adsorption induced stresses of zeolite films using magnetoelastic sensors”, Journal of Membrane Science, Volume 390-391, Pages 130-140 (2012)
15.	D. G. Dimogianopoulos, D. E. Mouzakis, **D. Kouzoudis**, "Statistical damage diagnosis in smart systems via contact-free MetGlas sensors and stochastic non-linear modelling of system output data", Int. J. Materials and Product Technology 41 (2011) 39-60
16.	Bakandritsos A, Mattheolabakis G, Chatzikyriakos G, Szabo T, Tzitzios V, Kouzoudis **D**, Couris S, Avgoustakis K., “Doxorubicin Nanocarriers Based on Magnetic Colloids with a Bio-polyelectrolyte Corona and High Non-linear Optical Response: Synthesis, Characterization, and Properties”, Advanced Functional Materials 21 (2011: 1465-1475)
17.	T. Baimpos, **D. Kouzoudis**, V. Nikolakis, L. Gora, "Are Zeolite Films Flexible?", Chem. Mater., 2011, 23 (6), pp 1347–1349
18.	T. Baimpos, **D. Kouzoudis**, V. Nikolakis, “Use of a Zeolite LTA Film for the Selective Detection of Light Hydrocarbons”, Sci. Adv. Mater. 2 (2010) 215-218

19.	T. Baimpos, P. Boutikos, V. Nikolakis, **D. Kouzoudis**, "A polymer-Metglas sensor used to detect volatile organic compounds", Sensors and Actuators A-Physical 158 (2010) 249-253
20.	**D. Kouzoudis**, "Proof of the phase coherence in the Bardeen–Cooper–Schrieffer theory of superconductivity from first principles", European Journal of Physics 31 (2010) 239–248
21.	C. Matzaroglou, P. Bougas, E. Panagiotopoulos, A. Saridis, M. Karanikolas, **D. Kouzoudis**, "Ninety-degree chevron osteotomy for correction of hallux valgus deformity: clinical data and finite element analysis". The Open Orthopaedics Journal 01 (2010) 4:152-6.
22.	T. Baimpos, V. Nikolakis, and **D. Kouzoudis**, "Measurement of the elastic properties of zeolite films using Metglas-zeolite composite sensors", Studies in Surface Science and Catalysis 174 (suppl. part A, 4th International FEZA Conference, 2-6 September 2008, Paris), pp. 665-668 (2008).
23.	S. C. Roy, J. R. Werner, **D. Kouzoudis**, and C. A. Grimes, "Use of Magnetoelastic Sensors for Quantifying Platelet Aggregation I: Whole Blood and Platelet Rich Plasma", Sensor Letters 6 (2008), 280–284
24.	V. Nikolakis, **D. Kouzoudis**, I. G. Giannakopoulos, and T. Baimpos, "The effect of gas adsorption on the elastic properties of faujasite films measured using magnetoelastic sensors", Chem. Mater., 20 (4), 1470–1475, (2008)
25.	S. Chen, M. Paulose, C. Ruan, G. K. Mor, O. K. Varghese, **D. Kouzoudis**, C. A. Grimes, "Electrochemically synthesized CdS nanoparticle-modified TiO2 nanotube-array photoelectrodes: Preparation, characterization,and application to photoelectrochemical cells", J. Photochem. Photobiol. B: Chem 177 (2006) 177–184
26.	**D. Kouzoudis** and D. E. Mouzakis, "A 2826 MB Metglas ribbon as a strain sensor for remote and dynamic mechanical measurements", Sensors and Actuators A: Physical Volume 127, Issue 2, 13 March 2006, Pages 355-359
27.	I. G. Giannakopoulos, **D. Kouzoudis**, C. A. Grimes, and V. Nikolakis, "Synthesis and characterization of a composite zeolite-Metglas carbon dioxide sensor," Adv. Func. Mater. 15 (2005) 1165-1170
28.	N. Bouropoulos, **D. Kouzoudis**, and C. A. Grimes, "The real-time, in situ monitoring of calcium oxalate and brushite precipitation using magnetoelastic sensors," Sensors and Actuators B 109 (2005) 227-232

29.	L. G. Puckett, G. Barrett, **D. Kouzoudis**, C. A. Grimes, L. G. Bachas, “Monitoring blood coagulation with magnetoelastic sensors,” Biosensors and Bioelectronics 18 (2003) 675-681
30.	**D. Kouzoudis** and C. A. Grimes, Invited Paper, "Remote query fluid-flow measurement using magnetoelastic thick-film sensors," J. Appl. Phys 87 (2000)
31.	**D. Kouzoudis** and C. A. Grimes, "The frequency response of magnetoelastic sensors to stress and atmospheric pressure," Smart Mater. Struct. 9 (2000) 1 – 5.
32.	**D. Kouzoudis**, "Exact analytical partition function and spin gap for a 2x3 quantum spin ladder," J. Magn. Magn. Mater. 214, 112-118 (2000).
33.	C. A. Grimes and **D. Kouzoudis**, "Remote query measurement of pressure, fluid-flow velocity, and humidity using magnetoelastic thick-film sensors," Sensors and Actuators 84 (2000) 205 - 212.
34.	C. A. Grimes, **D. Kouzoudis**, C. Mungle, “Simultaneous measurement of liquid density and viscosity using remote query magnetoelastic sensors”, Rev. Sci. Instr. 71, 3822 (2000).
35.	C. A. Grimes and **D. Kouzoudis**, "Magnetoelastic sensors in combination with nanometer-scale honeycombed thin film ceramic TiO2 for remote query measurement of humidity," J. Appl. Phys 87 (2000).
36.	C. A. Grimes, P. G. Stoyanov, **D. Kouzoudis**, and K. G. Ong, "Remote query pressure measurement using magnetoelastic sensors," Rev. Sci. Instr. 70, 4711 (1999).
37.	C.A. Grimes, C. Mungle, **D. Kouzoudis**, S. Fang, P.C. Eklund, "The 500 MHz to 5.50 GHz Complex Permittivity Spectra of Single-Wall Carbon Nanotube-Loaded Polymer Composites", Chemical Physics Letters, vol. 319, Issue 5-6, pp. 460-464 (2000).
38.	C. A. Grimes, K. G. Ong, K. Loiselle, P. G. Stoyanov, **D. Kouzoudis**, Y. Liu,C. Tong, and F. Tefiku, "Magnetoelastic sensors for remote query environmental monitoring," J. Smart Mater. Struct. 8, 639 (1999).
39.	C. A. Grimes, **D. Kouzoudis**, K. G. Ong, and R. Crump, “Thin-film magnetoelastic microsensors for remote query biomedical monitoring”, Biomedical Microdevices 2:1, 51-60 (1999).
40.	**D. Kouzoudis**, M. J. Breitwisch, and D. K. Finnemore, "Edge barrier pinning for a single superconducting vortex," Phys. Rev. B 60, 10508 (1999).

41.	**D. Kouzoudis**, "Exact analytical partition function and energy levels for a Heisenberg ring of N=6 spin 1/2 sites,"J. Magn. Magn. Mater. 189, 366-376 (1998).
42.	J. E. Ostenson, M. J. Breitwisch, **D. Kouzoudis**, and D. K. Finnemore, "Growth of a Transient Phase during Bi(2212) to Bi(2223) Transformation", Advances in Cryogenic Engineering (Materials), Vol. 44, Edited by Balachandran et al., Plenum Press, New York (1998).
43.	**D. Kouzoudis**, "Heisenberg s=1/2 ring consisting of a prime number of atoms," J. Magn. Magn. Mater. 173, 259-265 (1997).
44.	M. J. Breitwisch, **D. Kouzoudis**, J. E. Ostenson, D. K. Finnemore, and U. Balachandran, "Characterization of Interfacial Growth Between Bi(2212) and Ag Coating," IEEE Trans. Appl. Super. 7, 1691 (1997).
45.	D. K. Finnemore, Ming Xu, **D. Kouzoudis**, T. Bloomer, M. J. Kramer, S. McKernan, U. Balachandran, and P. Haldar, "Growth of nucleation sites on Pb-doped Bi(2212)," Appl. Phys. Lett. 68, 556 (1996).