

Georgios Heropoulos

Emeritus Researcher

Institute of Chemical Biology/ National Hellenic Research Foundation (NHRF)

Division of Organic and Medicinal Chemistry

Tel/Fax : 2107273873-831/E-mail: gherop@eie.gr

Website: <http://www.eie.gr/nhrf/institutes/iopc/cvs/cv-heropoulos-gr.htm>

Education

1980: University of Athens, Department of Chemistry, BSc, Chemist

1985: PhD in Chemistry with Dr. C.G. Screttas, (NHRF), University of Ioannina,
Department of Chemistry,

Appointments

1986-1988: University of the Aegean, Department of Environment and Ecosystems,
Fixed Term Contracts for Research

1988-1989: NHRF-Forestry Industries Consortium, Fixed Term Contract for Research

1989-1991: NHRF, Fixed Term Contracts for Research

1991: Post-doctoral Fellow with Prof. Dr. F. Bickelhaupt/Director, Vrije Universiteit (Free
University), Amsterdam, The Netherlands,

1991-1994: NHRF, Fixed Term Contracts for research

1995-1997: NHRF, Special Functional Scientist, Grade C

1997-1999: NHRF, Special Functional Scientist, Grade B

2000-2007: NHRF, Senior Researcher (Grade B)

2007-2019: NHRF, Research Director (Grade A)

2020-present: NHRF, Emeritus Researcher

Research Visit (2 months, 2005) at the Paris-Sud University, Laboratoire de Réactions Sélectives sur Supports (ICMMO), and Research Visit (2 months, 2007) at the University of Coventry, Faculty of Health and Life Sciences.

Scientific fields of interest

- Organic chemistry
- Medicinal chemistry
- Chemistry in High-Energy Microenvironments, Ultrasound (US) and Microwaves (MW).

- Synthesis of new bioactive compounds, heterocycles, cyclodextrins, dendrimers, by applying modern synthetic approaches. Development of new synthetic methodologies using non-conventional techniques.

Chemistry in High-Energy Microenvironments (General)

Nowadays chemists are bound to search for procedures that are both more efficient and compatible with environmental protection. During the last years the use of water as a solvent has become widespread, although it suffers from severe limitations because many organic compounds are poorly soluble in water, many reagents are not compatible with it and hydrolysis may compete with the desired reactions. In the last decade Ultrasound (US) and microwaves (MW) techniques have been increasingly exploited in organic synthesis because these new energy sources bring reactions to completion in minutes rather than hours or days. They can also induce reactions that would be otherwise very laborious and bring out peculiar chemoselectivities, thus have also opening up new synthetic pathways. Although the application domains of US and MW do not overlap, they both have a great potential towards developing environment-friendly synthetic methods. Many reactions have been studied in unusual reaction media (water, ionic liquids, supercritical fluids) and conditions (sonication under pressure and US/MW combined).

US have overcome most limitations to the use of water. After 1982, when Han and Boudjouk showed that ultrasound speeded up reactions and improved their yields, its applicative potential in organic synthesis became apparent. Soon the imperative to reduce industrial wastes and to develop a clean technology found new answers in sonochemical research. Besides cutting down reaction times ultrasound improves selectivity, abating the formation of side products, and promotes water to the status of an almost universal reaction medium. The chemical effects of ultrasound do not arise from changes in electronic, vibrational or rotational states of reagents, but from subtler physical actions. Sonochemistry is mainly based on cavitation, i.e., the formation, growth and implosive collapse of bubbles in a liquid. where chemical reactions take place in a uniquely favourable environment and large amounts of energy are transferred to reagent molecules in a very short time. Temperature rises of up to 5000 K and pressures can reach 1000 atm. Under these extreme conditions chemical reactions can be initiated. Ultrasound usually achieves a drastic reduction of reaction times and often increases yields by minimizing degradation from prolonged heating; sometimes it even promotes unusual regioselectivities. It may also enhance the effect of solid catalysts by activating their surface and increasing contact area.

Among the emergent techniques that are making a major contribution to the preparation of fine chemicals microwave (MW) is also paramount. Since 1981, when a

patent by B. Naresh (BASF) was filed dealing with the use of microwaves for the production of plasticizer esters and 1986 when Gedye and Giguere described MW-promoted syntheses in household MW ovens, there has been a continuously increasing interest in the use of this source of energy. Unlike ultrasound, irradiation with MW allows reactions to be efficiently carried out on neat reagents or reagents supported on an inert substrate, products usually being very clean, with a marked overall improvement over classical methods. The principle of performing chemical reactions under microwave irradiation is based on the fact that only polar molecules or conducting ions can be heated. In this way, higher yields are obtained, reaction times are decreased and better selectivities are observed when compared to classical heating. In addition, microwaves allow reactions to occur that would not otherwise be possible. Today, the use of microwaves in chemical and pharmaceutical laboratories all over the world has increased dramatically. The literature on this subject has grown in an explosive fashion, turning out an enormous mass of amazing results.

Current Research Highlights:

Main contribution using US and MW :

- Reactions with increasing steric crowding reagents affording very high yields in very short times. (US)
- Catalytic activity of a complex towards Suzuki–Miyaura coupling under aerobic conditions (MW). These reactions were impossible under the same conditions with conventional techniques.
- Possibility to assist any organic reaction in the presence of non-reacting solid additives (salts, etc.), independently if the reagents or solvents are ions or polar molecules. (MW)
- "Sonication switching" reactions. (US)
- Synthesis and studies in the field of dendrimers, cyclodextrins and other reactions (e.g Pechmann reaction), (US and/or MW).
- Novel use of Dual-Frequency US in synthesis (isoxazoles).

Membership of Scientific Societies

Member of the Association of Greek Chemists.

Member of the Association of Greek Researchers.

Participation in European Programs

- "Desertification of the Aegean", University of the Aegean, 1987-1991.
- "Conjugated Ladder-Type Oligomers and Polymers Containing Fused Six- and five-Membered Rings". Human Capital and Mobility Network (1/9/93 -1/12/96).

- "Simple and Mixed Metal Alkyls, Alkoxides and Amides in Synthesis and Catalysis, and as Precursors for New Ceramic and Polymeric Materials" Human Capital and Mobility Network (1/12/93-31/3/97).
- "Standards Measurements and Testings" European Program (1994 - 1998).
- "Design, Synthesis and Study of Novel Non-linear Optical Materials" Training and Mobility of Researchers Network (1/10/96-30/9/99).
- "Microwave and high-intensity ultrasound in the synthesis of fine chemicals", COST Action D32, (2004-2008).
- "Solid Phase Phospholipid and Dendrimer Synthesis "(SOPHOLIDES), (Marie Curie Host Fellowships for the Transfer of Knowledge), Contr. Numb. MTKD-CT- 2004-014399), 2005-2009.
- "A European Research Training Site for the Design and Synthesis of Novel Neuroprotective and Hypoglycemic Agents through a Multi-Disciplinary Approach", (EURODESYS), Marie Curie Actions, Structuring the European Research Area, 2006-2010.
- "Advancement of Research Capability for the Development of New Functional Compounds", (ARCADE), FP7-2009-REGPOT-1, (2010-2012).

Participation in National Projects

- "The environmental impact diversion of the Acheloos river diversion", (1987- 1988). University of the Aegean (Department of Environment and Ecosystems).
- "Livestock in the Aegean", (1988). University of the Aegean (Department of Environment and Ecosystems).
- "Reduction in the purchase cost of acetic acid to be used in the exploitation of Greek alpha-pinene", (1988-1989). Forestry Industries Consortium in collaboration with GSRT.
- Training program (ΕΠΕΑΕΚ, 1996-1998), NHRF, 6-16 Μαΐου 1998.
- "Synthesis of compatible organic additives for the protection of colored polyester fibers from photochemical bleaching", (NHRF, VIOCHROM). YPER 1997 (1/1/1999 - 31/12/2001)
- "Design and synthesis of hemi-labile ligands for homogeneous catalysis", Joint Research and Technology Programme for Bilateral Cooperation, Greece-Russia (1999 – 2001) Collaboration between NHRF, Siberian Branch of the Russian Academy of Sciences
- "Comparative study of the chemistry of aluminium and nickel cyclopentadienyl derivatives", (NHRF, Warsaw University of Technology), (2000 – 2002).
- "New products with high added value", (NHRF), PRAXE (M 4.1.1, EPAN)
- "Nanocatalysts. Synthesis. Characterization and applications", Scientific and Technological program (Greece and non-European countries), (2002-2003), NHRF, Université de Montréal, Département de chimie.

- "Novel catalysts for industrially important processes", Joint Research and Technology Programme for Bilateral Cooperation, Greece-Russia (2002 –2004), (NHRF, Siberian Branch of the Russian Academy of Sciences)
- "New Materials" Joint Research and Technology Programme for Bilateral Cooperation, Greece-Germany (2002 - 2004).
- "New approaches against neurodegenerative diseases", (NHRF) Excellence in Research Centers overseen by the GSRT (EPAN 3.3.1) (1/4/2002– 31/3/2005). PENED 2003 (EPAN 03ED242)
- "Dendrimers as near-infrared dyes" (NHRF)
- "Targeted therapeutic approaches to degenerative diseases, with emphasis on cancer and aging", (NHRF) Development Proposals for Research Organisations - KRIPIS (ESPA 2007-2013) – STHENOS.

Other Activities

- Greek representative in COST Action D32 "Chemistry in High-Energy Microenvironments".
- Member of the working group "Microwave and High- Intensity Ultrasound in the Synthesis of Fine Chemicals (2004-2008)"
- Associate Editor, Chemical Papers (2008-2009). Institute of Chemistry, Slovak Academy of Sciences, Versita and Springer verlag.
- Member of the Editorial Advisory Board, Chemical Papers (2010-). Institute of Chemistry, Slovak Academy of Sciences, Versita and Springer verlag.
- Guest Editor, Current Organic Chemistry. Special Issue entitled "Organic Chemistry with Microwaves and Ultrasound", (Jan. 2011).
- Reviewer in peer reviewed scientific magazines.
- Evaluator in European programs.
- Studies and activities to obtain the license from the General Chemical State Laboratory of Greece for 28 products by HG International (The Netherlands) and Lithofin (Germany).
- Member of the Organizing Committees for many International Conferences and Workshops (10th FEACHEM Conference on Organometallic Chemistry, Crete 1993, 20th International Conference on Organometallic Chemistry, Corfu 2002, 3rd Annual Workshop, COST Action D31, Athens, 2007). Member of Committees for Ph.D. students.

Publications in Peer Reviewed Journals and chapters of books

- 1) C. G. Screttas and G. A. Heropoulos, *Tetrahedron* 40, 275-5279, 1984. "A Question concerning the pKa range within which an organic free radical exhibits normal radical behaviour. The case of Galvinoxyl".
- 2) C. G. Screttas and G. A. Heropoulos, *Magn. Reson. Chem.* 28, 878-882, 1990. "Molar Paramagnetic Solvent NMR Shifts of Galvinoxyl in Toluene. Kinetics of the Reaction Between Galvinoxyl and Tertiary Amines at High Radical Concentrations".
- 3) G.-J. M. Gruter, G. P. M. van Klink, G. A. Heropoulos, O. S. Akkerman and F. Bickelhaupt, *Organometallics*, 10, 2535-2536, 1991. "Activation of Organomagnesium Reagents by Crown Ethers. Unusual Ether Cleavage of (2-Methoxy-1,3-xylene)-15-crown-4".
- 4) C. G. Screttas and G. A. Heropoulos, *J. Polym. Sci., Part A: Polym. Chem.* 30, 1771-1773, 1992. "Kinetic-Thermodynamic Evidence for the Involvement of SET steps in the Anionic Polymerization of Styrenes".
- 5) C. G. Screttas and G. A. Heropoulos, *J. Org. Chem.* 58, 1794-1799, 1993 "Spectroscopic Electronegativities of Alkyl Groups. A Method for Estimating Ionization Potentials of Di- and Triradicals".
- 6) C. G. Screttas and G. A. Heropoulos, *J. Org. Chem.* 58, 3654-3659, 1993. "Transferability-Additivity of Molar Volumes of Organic Liquids and Their Relation to Normal Boiling Points".
- 7) C.G.Screttas and G. A. Heropoulos, *J. Mol. Struct.*, 303, 149-153, 1994. "Correlating Thermochemical Data with Molar Volumes. Toward Defining Chemical Space".
- 8) C.G.Screttas, G. A. Heropoulos and B.R. Steele, *J. Chem. Soc., Faraday Trans.*, 1717-1719, 1996. "Deviation from Trouton's rule and a method for converting a non-constitutive molecular parameter into a constitutive one".
- 9) M. Micha-Screttas, B.R. Steele and G. A. Heropoulos, *Chemica Chronica*, 59, 75,(1997), "The contribution of infrared spectroscopy to the prognosis and diagnosis of malignant growths".
- 10) C.G. Screttas, G. A. Heropoulos, B.R. Steele and D. Bethell, *Magn. Reson. Chem.*, 36, 656-662, 1998. "Phosphorus-31 contact shifts as a measure of weak ligand affinities. Interaction between alkali metal fluorenone radical anions and certain phosphorus (III or IV) ligands".
- 11) M. Micha-Screttas, G. A. Heropoulos and Barry R. Steele, *J. Chem. Soc., Perkin Trans. 2*, 7, 1443-1446, 1999. "Evidence for a Concentration Dependent $\delta(7)$ Li NMR Contact Shift in Tetrahydrofuran Solutions of Lithium Naphthalene Radical Anion and the Effect of Added $\delta(7)\text{LiCl}$ ".
- 12) C.S. Salteris, I.D. Kostas, M.Micha-Screttas, G. A. Heropoulos, C.G. Screttas, A. Terzis, *J. Org. Chem* 64 (15), 5589-5592, 1999. "ortho-Directed Lithiation of ω -Phenoxyalcohols".

- 13) C.S. Salteris, I.D. Kostas, M. Micha-Screttas, G. A. Heropoulos, C.G. Screttas, A. Terzis, *Main Group Met. Chem.* 22(7), 427-434, 1999. "ortho-Directed Lithiation of ω -Phenoxyalkanethiols and N,N-Dimethyl, ω -Phenoxyalkaneamines. Crystal Structure of Bis[o[(dimethylamino) ethoxy]phenyl]mercury".
- 14) C.S. Salteris, I.D. Kostas, M. Micha-Screttas, B.R. Steele, G. A. Heropoulos, C.G. Screttas, A. Terzis, *J. Organomet. Chem.*, 590, 63-70, 1999. "Synthesis of lithium ω -(m- and p lithiophenoxy)alkoxides modified with magnesium 2-ethoxyethoxide. Crystal structures of bis[4-(2-hydroxyethoxy)phenyl]mercury and bis[4-(3-hydroxypropoxy)phenyl]mercury".
- 15) M. Micha-Screttas, G. A. Heropoulos, B.R. Steele, *J. Chem. Soc., Perkin Trans. 2*, 12, 2685-2690, 1999. "Interaction between alkali metal aromatic ketone radical anions and the chlorides of lithium and magnesium in solution. A case of a carbon-carbon bond strengthening through complex formation".
- 16) M. Micha-Screttas, G. A. Heropoulos and B.R. Steele, *Magn. Reson. Chem.*, 39, 586-592, 2001. "Structural changes in concentrated solutions of alkali metal monosubstituted benzophenone radical anions in pure and mixed solvents".
- 17) M. Micha-Screttas, C.G. Screttas, B.R. Steele and G. A. Heropoulos, *Tetrahedron Lett.* 43 (27), 4871-4873, 2002. "Chemical and physical evidence for metal-metal interchange between lithium alkoxides and dibutylmagnesium".
- 18) D.P. Catsoulacos, B.R. Steele, G. A. Heropoulos, M. Micha-Screttas, and C.G. Screttas, *Tetrahedron Lett.* 44 (24), 4575-4578, 2003. "An imino-phosphine dendrimeric ligand and its evaluation in the Heck reaction".
- 19) C.G. Screttas, G. A. Heropoulos, M. Micha-Screttas, B.R. Steele and D.P. Catsoulacos, *Tetrahedron Lett.* 44 (30), 5633-5635, 2003. "Reductive lithiation of alkyl phenyl sulfides in diethyl ether. A ready access to α,α -dialkylbenzylolithiums".
- 20) G. A. Heropoulos, S. Georgakopoulos and B. R. Steele, *Tetrahedron Lett.* 46, (14), 2469-2473, 2005. "High intensity ultrasound-assisted reduction of sterically demanding nitroaromatics".
- 21) C. Arbez-Gindre, B. R. Steele, G. A. Heropoulos, C. G. Screttas, J.E Communal, W. J. Blau and I. Ledoux-Rak, *J. Organomet. Chem.*, 690 (6), 1620-1626, 2005. "A facile organolithium route to ferrocene-based triarylmethyl dyes with substantial near IR and NLO properties".
- 22) S. Mastronicolis, N. Arvanitis, A. Karaliota, C. Litos, G. Stavroulakis, H. Moustaka, A. Tsakirakis and G. A. Heropoulos, *Food Microbiol.* 22 (2-3), 213- 219, 2005. "Cold dependence of fatty acid profile of different lipid structures of *Listeria monocytogenes*"
- 23) C. G. Screttas, G. A. Heropoulos, M. Micha-Screttas and B. R. Steele, *Tetrahedron Lett.* 46 (25), 4357-4360, 2005. "Medium dependent lithiated side products in the reductive lithiation of allylic phenylthioethers. Diethyl ether versus tetrahydrofuran".

- 24) S.K, Mastronicolis, A. Boura, A. Karaliota, P. Magiatis, N. Arvanitis, C. Litos, A. Tsakirakis, P. Paraskevas, H. Moustaka and G. A. Heropoulos, *Food Microbiol.* 23, 184–194, 2006. "Effect of cold temperature on the composition of different lipid classes of the foodborne pathogen *Listeria monocytogenes*: Focus on neutral lipids".
- 25) G. Cravotto, L. Boffa, M. Bia, W. Bonrath, M. Curini and G. A. Heropoulos, *SynLett*, 2605-2609, 2006. "An Easy Access to Aromatic Azo Compounds under Ultrasound/Microwave Irradiation".
- 26) I. D. Kostas, G. A. Heropoulos, D. Kovala-Demertzi, P. N. Yadav, J. P. Jasinski, M. A. Demertzis, F. J. Andreadaki, G. Vo-Thanh, A. Petit and A. Loupy, *Tetrahedron Lett.* 47, (26), 4403-4407, 2006. "Microwave-promoted Suzuki-Miyaura cross-coupling of aryl halides with phenylboronic acid under aerobic conditions catalyzed by a new palladium complex with a thiosemicarbazone ligand".
- 27) G. A Heropoulos, G. Cravotto, C. G. Screttas and B. R. Steele, *Tetrahedron Lett.* 48, (18), 3247-3250, 2007. "Contrasting chemoselectivities in the ultrasound and microwave assisted bromination reactions of substituted alkylaromatics with N- bromosuccinimide".
- 28) B. R. Steele, G. A. Heropoulos and C. G. Screttas, *Collect. Czech. Chem. Commun.* 72, 5–6, 589–598, 2007. "Metal chloride reductions with aromatic radical anions. The magnesium chloride catalysed cleavage of tetrahydrofuran by sodium naphthalene radical anion".
- 29) F. Wiesbrock, C. Patteux, T. K. Olszewski, A. Blanrue, G. A. Heropoulos, B. R. Steele, M. Micha-Screttas, and T. Calogeropoulou. *Eur. J. Org. Chem.* 4344–4349, 2008. "Solution-Phase Synthesis of First-Generation Tetraester Dendritic Branches Involving Microwave and/or Ultrasonic Irradiation".
- 30) S. K. Mastronicolis, N. Arvanitis, A. Karaliota, P. Magiatis, G. A. Heropoulos, C. Litos, H. Moustaka, A. Tsakirakis, E. Paramera, and P. Papastavrou. *Appl. Envir. Microbiol.* 74, 4543-4549, 2008. "Coordinated Regulation of Cold-Induced Changes in Fatty Acids with Cardiolipin and Phosphatidylglycerol Composition among Phospholipid Species for the Food Pathogen *Listeria monocytogenes*".
- 31) S. Aime, E. Gianolio, F. Arena, A. Barge, K. Martina, G. A. Heropoulos and G. Cravotto, *Org. Biomol. Chem.*, 7, (2), 370-379, 2009. "New cyclodextrin dimers and trimers capable of forming supramolecular adducts with shape-specific ligands".
- 32) M. Bucos, C. Villalonga-Barber, M. Micha-Screttas, B. R. Steele, C. G. Screttas and G. A. Heropoulos, *Tetrahedron* 66, 2061–2065, 2010. "Microwave Assisted Solid Additive Effects in Simple Dry Chlorination Reactions with N-Chlorosuccinimide".
- 33) G. A. Heropoulos, C. Villalonga-Barber, *Tetrahedron Letters* 52, 5319–5322, 2011. "A clean, palladium-catalyzed oxidative esterification of aldehydes using benzyl chloride".

- 34) K. Martina, M. Caporaso, S. Tagliapietra, G. Heropoulos, O. Rosati, G. Cravotto, *Carbohydrate Research*, 346, (17), 2677-2682, 2011. "Synthesis of water-soluble multidentate aminoalcohol β -cyclodextrin derivatives via epoxide opening".
- 35) G. A. Heropoulos, (Guest Editor), Special issue of *Current Organic Chemistry* 15, (2), 2011, "Organic Chemistry with Microwaves and Ultrasound".
- 36) C. G. Screttas, B. R. Steele, M. Micha-Screttas, G. A. Heropoulos, *Organic Lett.*, 14 (22) 5680-5683, 2012 "Aryllithiums with Increasing Steric Crowding and Lipophilicity Prepared from Chlorides in Diethyl Ether. The First Directly Prepared Room-Temperature- Stable Dilithioarenes".
- 37) G. Cravotto, K. Martina, M. Caporaso, G. Heropoulos, L. Jicsinszky, 2012 MRS Fall Meeting, Boston 25-30 Nov. 2012, MRS Online Proceedings Library, Volume 1492, Jan. 2013, pp. 177 182 doi: 10.1557/opl.2013.176, Cambridge University Press, 18 Feb. 2013, "Highly efficient Synthesis of per-substituted amino-cyclodextrins under Microwave Irradiation in a closed Cavity".
- 38) K. C. Prousis, N. Avlonitis, G. A. Heropoulos and T. Calogeropoulou, *Ultrasonics Sonochemistry*, DOI: 10.1016/j.ultsonch.2013.10.018, "FeCl₃-catalysed ultrasonic-assisted, solvent-free synthesis of 4-substituted coumarins. A useful, complement to the Pechmann reaction".
- 39) V. J. Sinanoglou, P. Zoumpoulakis, G. Heropoulos, C. Proestos, A. Ćirić, J. Petrovic, J. Glamoclija and M. Sokovic, *Journal of Food Science and Technology*, 2013 (accepted for publication), "Lipid and fatty acid profile of the edible fungus *Laetiporus sulphureus*. Antifungal and antibacterial properties".
- 40) M. Koufaki, T. Fotopoulou, G. A. Heropoulos, *Ultrasonics Sonochemistry*, 21, 35–39, 2014 "Synergistic effect of dual-frequency ultrasound irradiation in the one-pot synthesis of 3,5-disubstituted isoxazoles".
- 41) T. Tsiaka, P. Zoumpoulakis, V. J Sinanoglou, C. Makris; G. A Heropoulos, A. C. Calokerinos: *Analytica Chimica Acta* 877, 100-110, 2015 "Response Surface Methodology towards the Optimization of High-Energy Carotenoid Extraction from *Aristeus Antennatus* shrimp."
- 42) Chapter (pp. 147-165) in *SONOCHEMISTRY: New Opportunities for Green Chemistry*, Oct. 2016, World Scientific Publishing (UK), G. Chatel. Invited participation
- 43) D. Pournara, G. A. Heropoulos, M. Koufaki. *Tetrahedron Lett.* (2017),58, 2378-2380, "Convenient method for the synthesis of 5-(4-methoxyphenyl)-3H-1,2-dithiole-3-thione (ADT-OMe) and 5-(4-hydroxyphenyl)-3H-1,2-dithiol-3-thione (ADT-OH) using microwave irradiation"
- 44) T. Tsiaka T, D.Z, Lantzouraki, E. Siapi, V.J. Sinanoglou, G.A. Heropoulos, A.C. Calokerinos, P. Zoumpoulakis, *J Chromatogr B Analyt Technol Biomed Life Sci.* 1096; 160-171, 2018, "Macular carotenoids in lipid food matrices: DOE-based high energy

extraction of egg yolk xanthophylls and quantification through a validated APCI (+) LC-MS/MS method”

Selected International Conferences and Workshops (2005-2013)

- G. A. Heropoulos, Spyros Georgakopoulos, M. Micha-Screttas, Barry R. Steele. COST D32 (w.g. 06 and w.g 03), and COST D30 (w.g. 03), Workshop in New Synthetic Applications of High-Intensity Ultrasound and Microwave and High Pressure Environment, Torino, Italy, 18-19 February 2005. “High Intensity ultrasound assisted reactions of organic molecules”.
- G. A. Heropoulos, I. D. Kostas, André Loupy, D. Kovala-Demertzi, 16th International Conference on Organic Synthesis (IUPAC ICOS-16), Book of Abstracts, Paper No. ICOS-244, p. 225, Merida, Mexico, 11-15 June 2006. “Microwave-assisted Suzuki-Miyaura reaction catalyzed by a new palladium complex”.
- G. A. Heropoulos, C. G. Screttas and B. R. Steele Joint WG 06 & WG 08 Meeting of Action COST D32 "New perspectives for synthetic application of power ultrasound and microwave in the laboratory and industry" DSM, Kaiseraugst, Switzerland, 2 February 2007. “Diverse chemoselectivities in ultrasound and microwave assisted simple bromination reactions”.
- G. Cravotto, K. Martina, N. Chiambretti, A. Barge, G. A. Heropoulos, “Sopholides” Mid-Term Workshop, Athens 5-7 December 2007 “Efficient, regioselective functionalizations of cyclodextrinscarried out under power ultrasound or microwaves”.
- G. A. Heropoulos, T. Mason, D. Walton, M. Bucos, M. Micha-Screttas, C. G. Screttas and B. R. Steele, Joint WGs (3,6,8) Meeting, “Microwave and ultrasounds towards process intensification”, Rouen, France, 20-21 March 2008. “Preliminary indication of the ultrasound frequency dependence on the chemoselectivity of the bromination reactions of substituted alkylaromatics with N-bromosuccinimide”.
- M. Bucos, C. Villalonga-Barber, M. Micha-Screttas, B. R. Steele, C. G. Screttas and G. A. Heropoulos, COST D32 Action, “Chemistry under High-Energy Microenvironments”, Krakow (Poland) March 29-April 1 2009. “Salt effects on the microwave assisted dry chlorination reactions of xylenes with N-chlorosuccinimide”.
- B.R. Steele, S. Georgakopoulos, C. Villalonga-Barber, K.A. Vallianatou, G.A. Heropoulos, M. Micha-Screttas, International Dendrimer Symposium 6, Stockholm, Sweden, June 2009. “Synthetic approaches towards dendrimeric organometallic near-infrared dyes”.

- G.A. Heropoulos, M. Sleiman, M. Micha-Screttas, B.R. Steele, T. Calogeropoulou, International Dendrimer Symposium 6, Stockholm, Sweden, June 2009. "New "Click Chemistry" routes to polyhydroxy dendrons".
- M. Bucos, C. Villalonga-Barber, M. Micha-Screttas, B. R. Steele, C. G. Screttas, G. A. Heropoulos, 16th European Symposium on Organic Chemistry, Prague, 12-16 July 2009. "Salt Effects on Simple Microwave-Phonons Assisted Chlorination Reactions".
- M. Bucos, C. Villalonga-Barber, M. Micha-Screttas, B. R. Steele, C. G. Screttas and G. A. Heropoulos, 11th Frank Warren Conference, Pietermaritzburg, South Africa 17-21 January 2010. "Passive Heating Element and Salt Effect on Simple Microwave Assisted Chlorination Reactions".
- M. D. Manouilidou, L. Leondiadis, G. Heropoulos, K. Yannakopoulou, 15th International Cyclodextrin Symposium, Vienna, Austria, May 9-12, 2010. "Microwave assisted synthesis of a β -cyclodextrin dimer from mono(6-aminopropylamino-6-deoxy)- β CD and butynedioic acid".
- Robert Csonka, Mazen Sleiman, Cecile Arbez-Gindre, Barry R. Steele, Georgios A. Heropoulos, Theodora Calogeropoulou, Marco Signorelli, Alberto Schiraldi, Dimitrios Fessas, Maria Micha-Screttas 10 - 15 July, 2011 - Crete, GREECE, 17 th European Symposium on Organic Chemistry, "ITC Study of Lectin Binding to Novel Multifunctional Carbohydrate Hyperbranched Polymers".
- Georgakopoulos S., Heropoulos G. A., Steele B. R., Micha-Screttas M., Villalonga-Barber C., 10 - 15 July, 2011 - Crete, GREECE, 17 th European Symposium on Organic Chemistry, "Synthesis of Dendrimers with NIR dye Properties".
- G. A. Heropoulos and C. Villalonga-Barber, 4th International Symposium on Advances in Synthetic and Medicinal Chemistry (ASMC11), St. Petersburg, Russia, 21-25 Aug. 2011, "Fast palladium-catalyzed one-pot oxidative esterification of aldehydes".