

4WC PROGRAM MONDAY, NOVEMBER 8, 2004**ROOM NUMBER: Ballroom F**

TIME	TITLE	CHAIR / AUTHOR(S)
	Plenary and Energy and Energy Efficiency I	
08:30 – 08:45	CONGRESS WELCOME	R.F. Schiffman, Chair
08:45 – 09:45	Energy Efficiency: The Up To Date Argument for Selling Electrotechnologies	R. Belmans
09:45 – 10:15	BREAK	
10:15 – 10:30	Introduction to Commercialization Sessions	J.W. Cresko, Chair
10:30 – 11:15	European Regulations and Directives on Energy Efficiency, Renewables and CO ₂ Trading and Impact on Electricity	V. Di Geniero
11:15 – 12:00	Commercialization of Microwave Technology at High Temperature	M.W. Sato
12:00 – 13:30	LUNCH	
	Energy and Energy Efficiency II	
13:30 – 14:15	Energy Savings in the Chemical Industry	K. Van Reusel
14:15 – 15:00	Choosing RF or MW in Industry	M. Willert-Porada
15:00 – 15:30	BREAK	
15:30 – 16:15	Dielectric Heating Versus Other Electro-Technologies	C. Debard
16:15 – 16:25	Introduction to Round Table	R. Belmans
16:25 – 17:30	ROUND TABLE: The Impact of Electro Technologies and Their Applications to Energy Efficiency and Manufacturing Economics	V. Di Geniero, M. Machiels, M. Willert-Porada, C. Debard, K. Van Ruesel, M.W. Sato, P. Roberts, R. Belmans, Moderator: J. Cresko.
17:30 – 19:30	Poster Session (Hall 4)	M. Willert Porada, Chair

4WC PROGRAM: MONDAY, NOVEMBER 8, 2004**ROOM NUMBER: Ballroom G**

TIME	TITLE	CHAIR / AUTHOR(S)
	Microwave Waste Remediation	G. Wicks, Chair
13:30 – 14:00	Microwave Remediation of Aqueous Effluent Streams	D. Shorrock, G. Bond*, D.F. Lee
14:00 – 14:30	Microwave Assisted Processing of Phenol Wastewater on Activated Charcoal	I. Polaert, L. Estel*, A. Ledoux, C. Duhaufelle
14:30 – 15:00	New Apparatus For Toxic Waste and Sludge Treatment and For Plasma Processing of Fume by Microwave Power Technique	M. Melandri, M. Contarini, Alberto Brecia*
15:00 – 15:30	BREAK	
15:30 – 16:00	Unpollutant Microwave Incineration of Medical Waste with High Risk of Contamination	D. Niculae, D. Iordache*
16:00 – 16:30	Sealing Waste Tubes by Microwave Welding Tube	O. Aktushev, E. Jerby*
16:30 – 17:00	Carbon Reduction in Flyash Using Microwaves	C. Dodds*, E. Lester, S. Kingman, S. Bradshaw

ROOM NUMBER: 19A

TIME	TITLE	CHAIR / AUTHOR(S)
	Semiconductors and Electronics	K. Thompson, Chair
10:30 – 11:00	Study on Microwave Sintering of Multilayer Ceramic Capacitors	Y. Fang*, H. Peng, D.K. Agrawal, M.T. Lanagan, C.A. Randall
11:00 – 11:30	Athermal Photonic Effects on Boron Diffusion and Activation in Silicon During Microwave Rapid Thermal Annealing	C.J. Bonifas, K. Thompson, J.H. Bookse*, R.F. Cooper, M. Alvarex, A. Macconnet
11:30 – 12:00	Millisecond Microwave Annealing of Ultra-Shallow Boron Doped Silicon	K. Thompson*, J.H. Booske, J. Lohr, L. Ives, Y. Gorelov, K. Kajiwara, M. Alvarez
12:00 – 13:30	LUNCH	
13:30 – 14:00	Evidence for the microwave effect during the hybrid sintering of ZnO	J. Binner*, J. Wang, B. Vaidhyanathan
14:00 – 14:30	Microwave Sintering of Metal Powder Compacts	J. Cheng*, R. Guo, Y. Zhang, Q.-M. Wang
14:30 – 15:00	Microwave Sintering of Metal Powder Compacts	S. Takayama, G. Link, M. Sato, M. Thumm
15:00 – 15:30	BREAK	
15:30 – 16:00	Ultra-Rapid Millimeter Wave Annealing of Silicon Wafers	Y.V. Bykov, A.G. Ereemeev, I.V. Plotnikov, K.I.Rybakov*, V.E. Semenov
16:00 – 17:30	Round Table Discussion: The Changing Role of Microwave and RF in Semiconductor Processing	M. Kennedy

4WC PROGRAM: MONDAY, NOVEMBER 8, 2004**ROOM NUMBER: Hall 4****TIME: 18.00 – 19.30**

Poster	TITLE	CHAIR / AUTHOR(S)
	Poster Session	M. Willert-Porada, Chair
PS 1	Structural and Microstructural Modifications of Materials by Microwave Field Treatments	R. Peelamedu, R. Roy, D. Agrawal
PS 2	In-Situ Microscopic Observations of Material Transport During 2.45GHz Single Mode H-Field Treatment of Ferrites	R. Peelamedu, M. Sato, R. Roy, D. Agrawal
PS 3	Redistribution of Fields Inside a Single Mode Cavity During H-Field Heating of Ferrites	D.C. Dube, R. Peelamedu. D. Agrawal and R. Roy
PS 4	Microwave Sintering of Magnesium Fluoride	Z. Shi, J-Y Hwang, B. Li, Z. Huang
PS 5	The Suzuki Reaction Revised- Simplification and Scale-up in the Microwave Field	M. Nuchter, B. Ondruschka, D. Enke, M. Hermann
PS 6	Microwave Crystallization of Lithium Disilicate Glass	M. Mahmoud, D. Folz, C. Suchicital, D. E. Clark
PS 7	Drying Silica Zerogels Using Microwaves	C.E. Folgar, D.C. Folz, D.E. Clark
PS 8	Surface Hardening by Combining Cr-Electroplating and Microwave Resonance Plasma Nitriding of Cutting Points of Outsized Saws for Wood Industry	G.G. Demyashev, A.L. Taube
PS 9	Advances in Design of Microwave Resonance Plasma Source	A.L. Taube, G.M. Demyashev, Y. Shramkov
PS 10	Synthesis of SiC by the Microwave Assisted Carbothermal Reduction of Sugar Cane Wastes	T.P. Deksnyts, R.R. Menezes, P.M. Souto, E. Fagury-Neto, R. Kiminami
PS 11	Microwave Sintering of ZnO-CuO	R.S. Ferreira, R. Menezes, M.R. Morelli, R. Kiminami
PS 12	Microwave Sintering of Mullite	P.M. Souto, R. Menezes, R. Kiminami
PS 13	Study of the Microwave Sintering of Porcelain Bodies	R.R. Menezes, P.M. Souto, E. Fagury-Neto, R. Kiminami
PS 14	Microwave Combustion Synthesis of Lead Lanthanum Titanate (Pb, La)TiO ₃	C.C. dePaula, R.R. Menezes, J.A. Eiras, D. Garcia, R. Kiminami
PS 15	Wireless Microwave-Based Moisture Sensors for Hardwood Drying Kilns	W. Moschler*, G. Hanson
PS 16	Microwave Extraction of Antioxidant Components from Rice Bran	J.M. Assad, W.H. Duvernay, C.M. Sabliov, J.S. Godber, M. Lima
PS 17	A Review of the Performance and Reliability of The CPI AutoWave	H. Shulman, M. Fall
PS 18	An Investigation into the Applicability of Microwave Sintering Sn-Doped In ₂ O ₃	L. Sworts, M. L. Fall, D. Edwards, H. Shulman
PS 19	Impurity Reduction in the Microwave Melting and Casting of Metals	M.S. Morrow, H.E. Huey
PS 20	Coupled Electromagnetic Thermal and Kinetic Modeling for Microwave Processing of Polymers	R. Sun, S. Zhou, L. Zong, D. Mandal, L. Kempel, M. Hawley, A. Bernard
PS 21	"Casting Away Myths" About Microwave Processing of Metals	K. Givens, E. Ripley, Y. Hunt, J. Thomas

PS 22	Coupled Electromagnetic Thermal and Kinetic Modeling for Microwave Processing of Polymers	R. Sun
PS 23	Dielectric Constant Value Ferrites by Multimode Microwave Sintering	R. Peelamedu
PS 24	Susceptor Investigation for Microwave Heating Applications	G. Gaustad, M.L. Fall, H. Shulman
PS 25	Application of microwave irradiation to rapid transformations of organic compounds and macromolecules.	D. Bogdal*, J. Pielichowski, J. Gorczyk, S. Bednarz, M. Pajda, I. Stepien, E. Wolff, A. Burczyk
PS 26	Synthesis and Properties of Poly(styrene-co-butyl acrylate) Particles via Microwave-aided Emulsion Copolymerization	Y. Yoo*, G-H. Hong, K-Y. Choi, J.H. Lee
<i>PS26</i>	<i>Microwave Drilling of Glasses</i>	<i>E. Jerby*, O. Aktushev, V. Dikhtyar, O. Harpaz and P. Livshits</i>
<i>PS27</i>	<i>Microwave Drilling of Basalts</i>	<i>E. Jerby*, O. Aktushev, V. Dikhtyar, O. Harpaz and P. Livshits</i>
<i>PS28</i>	<i>Localized Heating, Melting, and Drilling of Silicon</i>	<i>E. Jerby*, O. Aktushev, V. Dikhtyar, O. Harpaz and P. Livshits</i>
<i>PS29</i>	<i>Efficient Brazing with Microwaves</i>	<i>Devendra Kumar*, S. Kumar, M. Dougherty, K. Cherian, D. Tasch</i>
<i>PS30</i>	<i>Carburization of Steel Alloys by Atmospheric Microwave Plasma</i>	<i>S. Kumar* D. Kumar, K. Cherian, M. Dougherty, D. Tasch</i>
<i>PS31</i>	<i>P/M Sintering by Atmospheric Microwave Plasma</i>	<i>K. Cherian*, S. Kumar, D. Kumar, M. Dougherty, D. Tasch</i>
<i>PS32</i>	<i>Atmospheric Pressure Plasma Microwave Processing</i>	<i>M. Dougherty, S. Kumar, D.Kumar, K. Cherian</i>
PS33	Microwave Synthesis and Sintering Studies on Silicon Carbide – Alumina Composites	L.N. Satapathy, P.D. Ramesh, D. Agrawal, R. Roy
<i>PS34</i>	<i>A Novel Microwave-Assisted Injection Moulding of Polymers</i>	<i>O Alothman, R.J. Day</i>

4WC PROGRAM: TUESDAY, NOVEMBER 9, 2004**ROOM NUMBER: Ballroom F**

TIME	TITLE	CHAIR / AUTHOR(S)
	Ceramic Processing	R. Kiminami / P.M. Tayler, Chairs
08:00 – 08:30	Microwave-Induced Mass Transport Enhancement in Nanoporous Aluminum Oxide Membranes	C.J. Bonifas, A. Marconett, J. Perry, J.H. Booske*, R.F. Cooper
08:30 – 09:00	Novel Processing of Nano-Structured Ceramics Using Microwaves	B. Vaidhyanthan* and J.G.P. Binner
09:00 – 09:30	A Novel Microwave Assisted Process to Synthesize Phosphate Nanowhiskers	S. Jalota, A.C. Tas and S.B. Bhaduri*
09:30 – 10:00	BREAK	
10:00 – 10:30	Microwave Drilling Overview (ceramics, glass, basalt)	E. Jerby*, O. Aktushev, V. Dikhtyar, O. Harpaz and P. Livshits
10:30 – 11:00	Reactive Oxide Braze Joining of Ceramic Tubes with a High Power 83GHz Millimeter-Wave Beam System	R.W. Bruce*, R.L. Bruce, D. Lewis III, S.H. Gold, M. Kahn, A.K. Kinkead, A.W. Fliflet, M.A. Imam
11:00 – 11:30	Microwave Brazing, a Novel Method for Joining Ceramics to Metals	R. Radtke, J. Geddes
11:30 – 13:30	LUNCH	
13:30 – 14:00	Synergistic Effects of Microwave-LASER Hybridization and Its Application to Ceramics Sintering	R. Peelamedu*, R. Roy, A. Badzian, S. Copley
14:00 – 14:30	Effect of Addition of ZrO ₂ as Secondary Particulates in Microwave Sintering of Silicon Nitride at 2.45GHz	S. Chockalingam*, D.A. Earl, H.S. Shulman
14:30 – 15:00	Microwave Assisted Reactive Sintering of Zirconium Oxynitrides	M. Panneerselvam*, M. Willert-Porada
15:00 – 15:30	BREAK	
15:30 – 16:00	Microwave Sintering of High Thermal Conductivity AlN	C.-Y. Hsieh, C.-N. Lin, S.-L. Chung*
16:00 – 16:30	Microwave Autogenous Firing of Heavy Clay Products	G.V.A. Tayler*, P. Williams
16:30 – 17:00	Microwave Sintering of Abrasion Resistant Alumina Liner Tiles	G. Swaminathan*, A.B. Datta
17:00 – 17:30	Precision Microgear Burnout and Firing with Microwaves	S.M. Allen, C.C. Chang, A.M. Morales, H.S. Shulman*

4WC PROGRAM: TUESDAY, NOVEMBER 9, 2004**ROOM NUMBER: Ballroom G**

TIME	TITLE	CHAIR / AUTHOR(S)
	Dielectrics	P. Veronesi, Chair
08:00 – 08:30	A Generalized Approach For Measuring The Dielectric Properties Of Lossy Composite Materials	M.J. Akhtar*, L. Feher, M. Thumm
08:30 – 09:00	A New Approach to the Measurement of Dielectric Properties as a Function of Temperature – Microwave Dielectric Thermal Analysis (MDTA)	S.B. Kumar*, G.B. Parkes, P.A. Barnes, M.J.N Sibley, G. Bond
09:00 – 09:30	Microwave Calorimetry Coupled with Dielectric Measurements and Near Infrared Spectroscopy: A Powerful Tool for Understanding Microwave Induced Reactions	R.J. Day, A. Nesbitt, C. Nightingale, P. Navabpour, G.F. Fernando, R. Degamber, T. Mann
09:30 – 10:00	BREAK	
10:00 – 10:30	Useful Relationships Between Dielectric Properties and Bulk Density of Powdered and Granular Materials	S. Nelson*
10:30 – 11:00	Temperature Dependence of Dielectric Relaxation of Solvents	C. Bonnet, L. Estel*, M. Delmotte, A. Ledoux, C. Duhaufelle
11:00 – 11:30	Express Monitoring of Dielectric Liquids' Permittivity	Y.N. Pchelnikov*, R.M Dymshits
11:30 – 13:30	LUNCH	
13:30 – 14:00	Measurement and Calculation of the Effective Dielectric Properties for Partially Hollow, Structured Geometries	J. George, G. Squier, E. Vileno*
14:00 – 14:30	Studies on the Dielectric Behavior of Polypyrrole and its Semi Interpenetrating Networks with Poly (Vinyl Chloride) in the Microwave Field	H. John, R. Thomas, R. Joseph, K.T. Mathew*
14:30 – 15:00	In-Situ Observations of Microwave Processing for Ferroic Materials in the H-Field	M. Sato*, R. Roy, P. Ramesh, D. Agrawal
15:00 – 15:30	BREAK	
15:30 – 16:00	High Temperature Microwave Dielectric Properties of Ceramic Nano- and Micropowders	T.E. Cross and G.A. Dimitrakis*
16:00 – 16:30	Dielectric Properties of Timber Samples under Pressure of Several Bars	N. Tran*, W.K. Tran, M. Malcman
16:30 – 17:00	Measuring the Dielectric Properties of Australian Wood Species	A. Taube, G.Daian, Y. Shramkov, M. Daian, A. Birnboim

4WC PROGRAM: TUESDAY, NOVEMBER 9, 2004**ROOM NUMBER: 19A**

TIME	TITLE	CHAIR / AUTHOR(S)
	Polymers	N. Tran, Chair
08:00 – 08:30	Microwave Assisted Synthesis, Crosslinking and Processing of Polymeric Materials	D. Bogdal, J. Pielichowski
08:30 – 09:00	Industrial Composite Curing with the 2.45 GHz HEPHAISTOS System	L. Feher*, V. Nuss, T. Seitz, M. Thumm
9:30 - 10:00	BREAK	
10:00 - 10:30	PAPER WITHDRAWN	
10:30 – 11:00	Microwave Assisted Blow Molding of Polyethylene-Terephthalate (PET) Bottles	L. Estel*, P. Lebaudy, A. Ledoux, C. Bonnet, M. Delmotte
11:00 – 11:30	A NEW PAPER WILL BE INSERTED HERE	R.J. Day
11:30 – 13:30	LUNCH	
13:30 – 14:00	Investigation on the Effect of Microwave Field on the Rheological Behavior of Polyaniline: Polyvinylalcohol Blends	R.M. Thomas, H. John, R. Joseph, K.T. Mathew*
14:00 – 14:30	Microwave and Conventional Mechanical and Thermal Analysis of the Reactions in Epoxy Vinyl Ester Resins	R. Gunaratne*, R. Day
14:30 – 15:00	Microwave Welding of Thermoplastic Rods without any Conductive Material	N. Tran*, W.K. Tam, M. Malcmanm
15:00 – 15:30	BREAK	
15:30 – 16:00	The Dielectric Properties and the Construction of Polymer-Based Micro Fluidic Devices Using Microwaves	A. Yusef*, W.K. Tam, M. Malcmanm, N. Tran
16:00 – 16:30	Dielectric Properties of Crosslinking Epoxy Resins at 2.45GHz	L. Zong*, S. Zhou, R. Sun, L. Kempel, M. Hawley
16:30 – 17:00	Microwave Techniques for the Preparation of Polymer Foams	A. Clarke, A. Nesbitt, R.J. Day, G.L.A. Sims, Z. Wu
17:00 – 17:30	Microwave and Conventional Calorimetry of Unsaturated Polyester and Urethane Acryate Resins and Their Blends	R.J. Day, S. Pechuay

4WC PROGRAM: TUESDAY, NOVEMBER 9, 2004**ROOM NUMBER: 19B**

TIME	TITLE	CHAIR / AUTHOR(S)
	Case Histories // Single Mode	D. Parent & B. Wilson (Case Histories) D. Agrawal (Single-Mode)
08:00 – 08:30	Microwave Preconditioning to Accelerate Solar Drying of Timber	G. Brodie
08:30 – 09:00	Investigations and Case Studies of Microwave Heating in the Parquet Industry	T. Kayser*, M. Pauli, W. Sorgel, J. von Hagen, W. Wiesbeck
09:00 – 09:30	Microwaving Logs for Energy Savings and Improved Paper Properties for Mechanical Pulps	J.H. Klunness, E.G. Horn
09:30 – 10:00	BREAK	
10:00 – 10:30	New Microwave Technology and Equipment for Wood Modification	G. Torovnikov*, P. Vinden
10:30 – 11:00	Microwave Drying of Paper Documents	M. Hajek
11:00 – 11:30	Cooking Vegetables and Ready Meals by Microwaves and Steam with the Valvo-Pack™ Valve	J-P Bernard*
11:30 – 12:00	Drying Macadamia Nuts by Hot Air Combined with Microwaves As Compared to the Conventional Hot Air Process	F.A. Silva, A. Marsoioli, Jr.*
12:00 – 13:30	LUNCH	
13:30 – 15:00	BREAK	
15:00 – 15:30	Seaweed Processing Using Industrial Single Mode Cavity Microwave Heating	G. Conner, A.J. Easteal, M.A. Farid, R.B.Keam, S.F. Uy*
15:30 – 16:00	Microwave Synthesis of Aligned Carbon Nanotubes in a Single Mode Cavity	J. Cheng*, D. Agrawal, Y. Zhang
16:00 – 16:30	Microwave-Induced Magnetic Decrystallization	S.M. Copley*, R. Peelamedu, D. Agrawal, R. Roy
16:30 – 17:00	H-Field Induced Changes in Ni-Zn Ferrites by Single Mode Microwave Irradiation	R. Peelamedu, D. Agrawal, R. Roy, S. Copley*

4WC PROGRAM: WEDNESDAY, NOVEMBER 10, 2004**ROOM NUMBER: Ballroom F**

TIME	TITLE	CHAIR / AUTHOR(S)
	Ceramics // Glass / Minerals // Biomaterials-Biomedical	R. Kiminami (Ceramics) G. Link (Glass/Minerals) D. Folz / S. Hagness (Biomaterials)
08:00 – 08:30	Microwaves for Sol-Gel Synthesis of Boron Carbide (B ₄ C)	M. Rodriguez, U. Ortiz, O. Kharissova, J. Aguilar*, Z. Valdez
08:30 – 09:00	Microwave Synthesis of Lamp Phosphors	Y. Fang*, D. K. Agrawal, J.C. Walck, J.M. Coveleskie, R.T. McSweeney, C-N. Chau
09:00 – 09:30	Factors Effecting the Crystallization of Zeolites Synthesized by Microwave Heating	B.M. Panzarella*, W.C. Conner, G. Thompsett
09:30 – 10:00	BREAK	
10:00 – 10:30	The Effect of Heating Rate, Stirring and Power Delivery on Silicalite Microwave Synthesis	G.A. Thompsett, W.C. Conner
10:30 – 11:00	Microwave Activated Combustion Synthesis of Intermetallics in the Co-Si System	J.R. Jokisaari, S. Bhaduri, S.B. Bhaduri*
11:00 – 11:30	Microwave-Induced Combustion Synthesis of Ni-Cr Ferrite Nanopowders	P. Sarubo, Jr, L. Gama, R. Kiminami*
11:30 – 13:30	LUNCH	
13:30 – 14:00	Latest Developments in Microwave Processing of Mineral Ores	S. Bradshaw, D. Jones, L. Groves, S Kingman*, E. Lester D. Whittles
14:00 – 14:30	The Influence of Microwaves on the Leaching Kinetics of Sulphide Minerals	M. Al-Harahsheh*, S. Kingman, N. Hankins, C. Somerfield, S. Bowater
14:30 – 15:00	Glass Matrix Composites with Lead Zirconate Titanate Particles Processed by Microwave Heating	P. Veronesi*, C. Leonelli, V. Cannillo, E.J. Minay, A.R. Boccaccini
15:00 – 15:30	High Temperature Processing of Powders Using Millimeter-Waves Abstract has been added	G. Link ^{*1} , M. Hauser-Fuhlberg ² , M. Janek ² , R. Nüesch ² , S. Takayama ^{1,3} , M. Thumm ^{1,4} , A. Weisenburger ¹
15:30 – 16:00	RF Radiators for Homogenous Heating	Y. Pchelnikov*, R. Dymshits,
16:00 – 16:30	Method for Extracting Arrhenius Parameters from Transient Temperature Experiments	J.A. Pearce*
16:30 – 17:00	Comprehensive Study of Dielectric Properties of Porcine Head and Neck Tissues at Microwave Frequencies	A. Peyman*, S. Holden, S. Watts, R. Perrott, C. Gabriel
17:00 – 17:30	Sterilization by ECR Plasma	S. Helhel, L. Oksuz, O. Cerezci, A. Yousefi

4WC PROGRAM: WEDNESDAY, NOVEMBER 10, 2004**ROOM NUMBER: Ballroom G**

TIME	TITLE	CHAIR / AUTHOR(S)
	Plasma Processing	Lynn Johnson, Chair
08:00 – 08:30	Characteristics of Microwave Plasma	S. Helhel, L. Oksuz
08:30 – 09:00	Anisotropy and Selectivity Interdependence Using NF_3 Gas Mixtures	J.A. Barkanic*, R. Jaccodine
09:00 – 09:30	Applications of High Pressure Plasma Chemistry to the Abatement of Perfluorocompounds from Microelectronics Manufacturing	M. Radoiu*
09:30 – 10:00	BREAK	
10:00 – 10:30	Microwave Generated Plasma for the Oxidative Decomposition of Organics in High Throughput Applications	G. Bond*, C. Bool, J. Qiao, M. Richardson
10:30 – 11:00	Microwave Gas-Discharge Ultraviolet Lamp	E.M. Barmhudarov*, I.A. Kosygi, M.A. Misakyan, A.G. Romyantseva, I.M. Taktakishvii, A.V. Tulupov
11:00 – 11:30	Microwave Torch, Physics and Plasma Chemical Applications	S.I. Gritsinin, V.Yu Knyazev, V.A. Kop'ev, I.A. Kosygi*
11:30 – 13:30	LUNCH	
13:30 – 14:00	Designing a Ridge Waveguide Cavity Using Simulation Software for Generating Micro-Plasma for Wool Fiber Coating Operations	N. Tran*, W.K. Tam, M. Malcman
14:00 – 14:30	Results of DBD on Wool and Cotton	S. Korkmaz, L. Oksuz, S. Helhel
14:30 – 15:00	Repetitive Emission of Traveling Fireballs in Microwave Resonator	V. Dikhtyar, E. Jerby*
15:00 – 15:30	BREAK	
15:30 – 16:00	Efficient Brazing with Microwaves	D. Kumar*, S. Kumar, M. Dougherty, K. Cherian, D. Tasch
16:00 – 16:30	Carburization of Steel Alloys by Atmospheric Microwave Plasma	S. Kumar* D. Kumar, K. Cherian, M. Dougherty, D. Tasch
16:30 – 17:00	P/M Sintering by Atmospheric Microwave Plasma	K. Cherian*, S. Kumar, D. Kumar, M. Dougherty, D. Tasch
17:00 – 17:30	Atmospheric Pressure Plasma Microwave Processing	M. Dougherty, S. Kumar, D.Kumar, K. Cherian

4WC PROGRAM: WEDNESDAY, NOVEMBER 10, 2004**ROOM NUMBER: 19A**

TIME	TITLE	CHAIR / AUTHOR(S)
	Modelling	K. Rybakov, Chair
08:00 – 08:30	“Selftransflence” Effect of Powerful Microwave Penetration in Water	V.Y. Knyazev, I.A. Kossyi*, N.I. Malykh, E.S. Yampol’skii
08:30 – 09:00	Reducing the Energy Reflection from an Applicator Suitable for Microwave Wood Processing	M. Daian, A. Taube, Y Shramkov
09:00 – 09:30	Numerical Modeling Technique to Predict the Dielectric Properties of Wood	A Taube, G. Daian, M. Daian, Y, Shramkov, A. Birnboim
09:30 – 10:00	BREAK	
10:00 – 10:30	The Microwave Drill Thermal Runaway Analysis	E. Jerby*, O. Aktushev, V. Dikhtyar
10:30 – 11:00	A Model of Millimeter-Wave Heating of Silicon Powder Compacts	Y.V. Bykov, S.V Egorov, A.G. Ereemeev, I.V. Plotnikov, K.I. Rybakov, V.E. Semenov
11:00 – 11:30	Microwave Heating of Conductive Materials	K.I. Rybakov*, V.E. Semenov
11:30 – 13:30	LUNCH	
13:30 – 14:00	Modeling of Reactive Oxide Braze Joining of Ceramic Tubes with a Millimeter Wave Beam Source	A.W Filflet*, R.W. Bruce, D. Lewis, III, R.L. Bruce, S.H. Gold
14:00 – 14:30	The Application of the Joint Method in Order to Compute the Effects Generated by the Shifting of the Source in a Loaded Cavity	D. Soproni*, T. Maghiar, A. Grava, N. Maghiar, M. Pantea
14:30 – 15:00	Investigations of Non-Thermal Microwave Effects Using Hybrid Conventional/Microwave Heating Calorimetry	J. Binner, D.M. Price*, M. Reading, B. Vaidhyanathan
15:00 – 15:30	BREAK	
15:30 – 16:00	Thermal Validation of the FDTD Method in a Multimode Cavity	J. George*. M. Muktoyuk, R. Bergman
16:00 – 16:30	Numerical Analysis of Microwave Heating of Liquid Materials	C.M. Sabliov*
16:30 – 17:00	Simulations and Experiments on the Effects of Millimeter-Wave Heating of Orthotropic and Anisotropic CFRP Composites	C. Hunyar, L. Feher*, M. Thumm
17:00 – 17:30	Optimization of Reflection and Transmission Characteristics of a Waveguide Window	V. Yakovlev*

4WC PROGRAM: WEDNESDAY, NOVEMBER 10, 2004

SESSION TITLE:

SESSION CHAIR:

ROOM NUMBER: 19B

TIME	TITLE	CHAIR / AUTHOR(S)
	Economics // System Architecture and Design	B. Schiffman/M. YONNONE (Economics) J. Gerling (System Architecture)
08:00 – 08:30	Productivity – “What does it Mean?”	B. Krieger
08:30 – 09:00	Microwave Equipment Manufacturers Viewpoint of Equipment Economics	M. Yonnone*
09:00 – 09:30	A Primer on Evaluating the Economics of a MW or RF Processing System	R. Schiffman
09:30 – 10:00	Stimulating Microwave and RF Application Innovation	S. Bowater*, D. Clunie, S. Kingman
10:00 – 10:30	BREAK	
10:30 – 11:00	Health, Regulatory and Equipment Safety Issues Related to Industrial Microwave Applications	J. Gerling*
11:00 – 11:30	Tubular Microwave Sintering Furnace with Inert Gas Flushing for Sintering Metallics Samples	G. Swaminathan*, A. Upadhyaya
11:30 – 13:00	LUNCH	
13:00 – 13:30	Two Novel Sources of Variable Frequency Microwave Energy	Y. Pschel'nikov*, V.A. Solntsev
13:30 – 14:00	Activation System for Electrochemical Automotive Power Devices	F. Bauer, R. Tap, M. Willert-Porada*
14:00 – 14:30	Ultra High Temperature Microwave Sintering – Furnace and Process Design	M. Willert-Porada, T. Gerdes, R. Borchert, H.S. Park
14:30 – 15:00	New Gyro-Device Systems for Millimeter Wave Processing of Materials	Y. Bykov, G. Denisov, A. Ereemeev, M. Glyavin, V.Kholoptsev, A. Kuftin, S. Samsonov, V. Zapevelov
15:00 – 15:30	BREAK	
15:30 – 16:00	Autowave ^R Laboratory Microwave Packed Bed Reactor (patent pending)	M.L. Tracy, T.A. Treado, D. Parent
16:00 – 16:30	Control of Continuous Microwave Drying Process of Peanuts Using Remote Temperature Measurement	D. Boldar*, T.H. Sanders, S.A. Hale
16:30 – 17:00	Application Considerations of High Power Microwave Pressure/Vacuum Windows	J. Gerling

4WC PROGRAM: THURSDAY, NOVEMBER 11, 2004**ROOM NUMBER: Ballroom F**

TIME	TITLE	CHAIR / AUTHOR(S)
	Metals Processing	T. Treado, Chair
08:00 – 08:30	An Introduction of Microwave Processing of Metals	E. Ripley, D. Douglas*
08:30 – 09:00	Current Advances in Microwave Processing of Metals and Related Emerging Technologies	E. Ripley*, D. Douglas
09:00 – 09:30	Microwave Interactions in The Melting of Metals	H.E. Huey*, M.S. Morrow
09:30 – 10:00	BREAK	
10:00 – 10:30	Interaction of High Power Microwave Beams with Metal Dielectric Media (Physics and Applications)	G.M. Batanov, N.K. Berezhetskaya, I.A. Kossyi*, A.N. Magunov, V.P. Silakov
10:30 – 11:00	Continuous Production of Nanophase Metals, Metal Oxides and Mixtures Using a Microwave Drive Polyol Process	D.A. Lewis, III*, L.K. Kurihara, R.W. Bruce, R.L. Bruce, A.W. Fliflet, S.H. Gold
11:00 – 13:00	LUNCH	

ROOM NUMBER: Ballroom G

TIME	TITLE	CHAIR / AUTHOR(S)
	Organic Chemistry	Mayur Lodaya
08:00 – 08:30	Can Microwave-Assisted Reactions and Processes be Qualified and Validated?	M. Nuchter*, B. Ondruschka, R. Bierman, D. Weiß, R. Beckert
08:30 – 09:00	Aspects of Propane Oxidation at Perovskite Catalysts in a Multimode Oven	H. Will, P. Scholz*, B. Ondruschka, W. Burckhardt
09:00 – 09:30	Stereochemical Control in Microwave Stimulated Acylation Reactions	G. Bond*, J. Gardner, A. Taylor
09:30 – 10:00	BREAK	
10:00 – 10:30	“Greener” Chemical Syntheses Using Microwaves	R. Varma*, J. Yuhong
10:30 – 11:00	New Flax Yarn Cross-Linked with Citric Acid by Thermal Treatment of By Microwave Irradiation	G. Gastaldi, E. Vismara*, M. Comoli, G. Torri, C. Leonelli, P. Veronesi, G. Rondi, S. Maini
11:00 – 13:00	LUNCH	

4WC PROGRAM: THURSDAY, NOVEMBER 11, 2004
ROOM NUMBER: BALLROOM D

TIME	TITLE	CHAIR / AUTHOR(S)
	Inorganic Chemistry	Becky Schulz, Chair
08:00 – 08:30	Melting and Processing of Silicon by Microwave Heating	T. Gerdes*, H.S. Park, I. Sen, M. Willert-Porada
08:30 – 09:00	Treatment of Residuary Acids by Microwaves	J. Bernard*
09:00 – 09:30	Development of NiZnFe ₂ O ₄ with Ultra-Low Dielectric Constant Value Ferrites by Multimode Microwave Sintering	R. Peelamedu, P. Yadoji*, D. Agrawal, R. Roy
09:30 – 10:00	BREAK	
10:00 – 10:30	Synthesis of Monodispersed Iron Oxide Particles in a Large-Scale Microwave Reactor	J-Y Hwang, S. Shi, Z. Xu, K.W. Peterson
10:30 – 11:00	Morphology- and Size-Controlled Synthesis of Nanoparticles Driven Under Microwave Irradiation	S. Yanagida and Y. Wada*
11:00 – 11:30	Acceleration of Microwave Irradiation on the Melting of Fluoride	B. Li*, Z. Huang, J. Hwang, S. Qu, S. Shi, Z. Xu
11:30 – 13:00	LUNCH	