SHAPING-4 CONFERENCE

Madrid (Spain) November 15-18, 2009

Programme

SUNDAY 15th November

16:00 - 18:00 h *Registration at Conference site*

18:00 - 19:00 h *Opening session and Plenary Lecture (PL)*
COLLOIDAL APPROACH TO RAPID SHAPE FORMING,
F. F. Lange.
Materials Department, University of California at Santa Barbara, Santa Barbara, CA 93111, USA. flange@engineering.ucsb.edu

19:00 - 21:00 h *Welcome Cocktail*

MONDAY 16th November

Session 1 (S1) *Chair persons: J. Halloran & P.J. Sánchez-Soto*

08:30 - 09:00 h **Invited Lecture (IL1)**
PROCESSING AND PROPERTIES OF NANOSTRUCTURED YSZ CERAMICS.
J. Binner, B. Vaidhyanathan, A. Annapoorani, S. Huang, and J. Bai.
Department of Materials, Loughborough University, Loughborough, UK.
j.binner@lboro.ac.uk

09:00 - 09:30 h **Invited Lecture (IL2)**
MONO- AND OLIGOSACCHARIDES IN DEFLOCCULATION PROCESS OF NANOCERAMIC POWDERS.
M. Szafran, P. Falkowski, and A. Danelska.
Warsaw University of Technology, Faculty of Chemistry, Warsaw, Poland.
szafran@ch.pw.edu.pl

09:30 - 09:45 h (S1-1) CONTROL OF MICROSTRUCTURE IN CERAMICS BY SLIP CASTING UNDER A STRONG MAGNETIC FIELD.
T. S. Suzuki, T. Uchikoshi, and Y. Sakka.
Fine Particle Processing Group, Nano Ceramics Center, National Institute for Materials Science, Tsukuba, Ibaraki, Japan. SUZUKI.tohru@nims.go.jp.

09:45 - 10:00 h (S1-2) CRITICAL PARTICLE SIZE FOR SHAPING DENSE CERAMIC BODIES BY SLIP CASTING.
C. Tallon, M. Limacher, and G. V. Franks.
Department of Chemical and Biomolecular Engineering, University of Melbourne, Melbourne, Australia, tallon@unimelb.edu.au

10:00 - 10:15 h (S1-3) HYBRIDIZATION OF TEXTURE INDUCING PROCESSES.
E. Suvaci[1], K. Keskinbora[1], T. S. Suzuki[2], and Y. Sakka[2].
[1]Department of Materials Science and Engineering, Anadolu University, Eskisehir, Turkey, [2]Fine Particle Processing Group, Nano Ceramics Center, National Institute Materials Science, Tsukuba, Ibaraki, Japan, esuvaci@anadolu.edu.tr

10:15 - 10:30 h (S1-4) POWDER PROCESSING FOR TRANSPARENT POLYCRYSTALLINE ALUMINA.
M. Stuer[1,2], P. Bowen[1], and Z. Zhao[2].
[1]Powder Technology Laboratory, Material Science Institute, Swiss Federal Institute of Technology, Lausanne, Switzerland, [2]Department of Physical, Inorganic and Structural Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, Sweden, michael.stuer@epfl.ch

10:30 - 10:45 h (S1-5) DEVELOPMENT OF GRAIN ORIENTED TUNGSTEN BRONZE CERAMICS WITH MAGNETIC FIELD.
T. Kawase, E. Yaegaki, S. Tanaka, and K. Uematsu.
Department of Materials Science and Technology, Nagaoka University of Technology, Kamitomioka, Niigata, Japan, keizouematsusan@hotmail.co.jp

10:45 - 11:00 h (S1-6) REALISATION OF CERAMIC HOLLOW FIBER GAS SEPARATION MEMBRANES BY SPINNING WITH PHASE INVERSION.
F .M. M. Snijkers, C. Buysse, J. J. Luyten , M. Schillemans, and A. Buekenhoudt.
Flemish Institute for Technological Research (VITO), Mol, Belgium, frans.snijkers@vito.be

11:00 - 11:30h Coffee Break

Session 2 (S2) *Chair persons: F. Rossignol & M.I. Nieto*

11:30 - 12:00 h **Invited Lecture (IL3)**
ELABORATION OF TAILORED MILLIMETRIC POROUS CERAMIC SPHERES BY COLLOIDAL WAY.
C. Pagnoux.
SPCTS, ENSCI, CNRS, Limoges, France, cecile.pagnoux@unilim.fr

12:00 - 12:15 h (S2-1) PARTICLE PACKING IN PARAFFIN-WAX SUSPENSIONS USED FOR LPIM.
A. Dakskobler and T. Kosmač.
Engineering Ceramics Department, Jožef Stefan Institute, Ljubljana, Slovenija, ales.dakskobler@ijs.si

12:15 - 12:30 h (S2-2) POWDER-BINDER-SEPARATION IN INJECTION MOULDED GREEN PARTS.
A. Mannschatz, S. Höhn, and T. Moritz.
Fraunhofer Institute for Ceramic Technologies and Systems, Dresden, Germany, Anne.Mannschatz@ikts.fraunhofer.de

12:30 - 12:45 h (S2-3) AQUEOUS DISPERSION OF TUNGSTEN POWDER FOR INKJET PRINTING PROCESS.
J. Pommay, M. Lejeune, C. Dossou-Yovo, M. Mougenot, and R. Noguera.
SPCTS–UMR 6638, Limoges, France, CERADROP - ESTER Technopole, Limoges, France, judith.pommay@etu.unilim.fr

CANCELLED (S2-4) SOLID FREEFORM FABRICATION OF Al_2O_3/TiO_2 GRADIENT MATERIALS.
C. M. Gomes[1], N. Travitzky1, P. Greil[1], O. R. K. Montedo[2], A. P. N. de Oliveira[2], and D. Hotza[2].
[1]Department of Materials Science, Institute of Glass and Ceramic, Erlangen, Germany. [2]Group of Ceramic and Glass Materials (CERMAT), Federal University of Santa Catarina (UFSC), Florianópolis, Brazil, nahum.travitzky@ww.uni-erlangen.de

12:45 - 13:00 h (S2-5) NEW FRONTIERS IN CERAMIC MICRO SHAPING TECHNOLOGIES.
Y. DeHazan, J. Heinecke, and T. Graule.
EMPA Swiss Federal Laboratories for Materials Testing and Research, Laboratory for High Performance Ceramics, Dübendorf, Switzerland, Yoram.dehazan@empa.ch

13:00 - 13:15 h (S2-6) PHOTOPOLYMERIZATION OF CERAMIC SUSPENSIONS.
J. W. Halloran and V. Tomeckova
Department of Materials Science and Engineering, University of Michigan, Michigan, USA, peterjon@umich.edu

13:15 - 15:00 h Lunch

15:00 – 15:30 h **Invited Lecture (IL4)**
INNOVATIVE PRODUCTION PROCESSES FOR CERAMIC MEMS/NEMS.
M. Schulz and T. Hanemann.
Forschungszentrum Karlsruhe, Institute for Materials Research III, Karlsruhe, Germany. Department of Microsystems Engineering – IMTE, University of Freiburg, Germany, Michael.Schulz@imf.fzk.de

15:30 – 17:00 h **Poster Session-1 (P1)**

(P1-1) CONDUCTING ALUMINA PARTICLES: EFFECT OF IONIC STRENGTH AND pH ON ZETA POTENTIAL.
R. C. D. Cruz[1,3], A. M. Segadães[2], R. Oberacker[3], and M. J. Hoffmann[3].
[1]Univ. Caxias do Sul, Dept. Mechanical Eng., 95070-560 Caxias do Sul, Brazil, [2]Univ. Aveiro, Dept. Ceramics and Glass Eng. (CICECO), 3810-193 Aveiro, Portugal [3]Univ. Karlsruhe, Inst. Ceramics in Mechanical Eng., 76131 Karlsruhe, Germany, rcdcruz@ucs.br

(P1-2) CHEMICAL STABILITY OF AQUEOUS/NONAQUEOUS (V,Zr)SiO_4 SUSPENSIONS.
E. Ozel, S. Akdemir, and E. Suvacı.
Department of Materials Science and Engineering, Anadolu University, 26480 Eskisehir, Turkey, eozel@anadolu.edu.tr

(P1-3) IMPROVEMENT OF THE DISPERSION OF THE MWCNT IN A ZIRCONIA MATRIX BY THE ADDITION OF PARTIALLY COATED MWCNT AND COLLOIDAL PROCESSING.
N. Garmendia[1], I. Santacruz[2,3], R. Moreno[2], and I. Obieta[1].
[1]Unidad de Salud, INASMET-TECNALIA, San Sebastián/Gipuzkoa, Spain. [2]Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain. [3]Departamento de Química Inorgánica, Cristalografía y Mineralogía, Universidad de Málaga, Málaga, Spain, nere.garmendia@inasmet.es

(P1-4) KINETICS AND SYNTHESIS MECHANISM OF CORDIERITE BY KAOLIN/TALC/ALUMINA MIXTURE IN SLIP CASTED BODIES.
J. B. Rodrigues Neto[1], D. Hotza[2], and R. Moreno[3].
[1]Sociedade Educacional de Santa Catarina – SOCIESC. Rua Albano Schmith, 3333 – 89206-001 – Joinville – Brasil. [2]Universidade Federal de Santa Catarina – CTC – ENQ – Caixa Postal 476 – 88040-900 – Florianópolis – Brasil. [3]Instituto de Cerámica y Vidrio – CSIC - C/ Kelsen, 5 – 28049 – Madrid – Spain, jbrn.ufsc@gmail.com

(P1-5) PRESSURE FILTERING AND DENSIFICATION OF FINE GRAINED MAGNESIUM ALUMINATE SPINEL.
F. Orgaz.
Instituto de Cerámica y Vidrio, CSIC. Campus de Cantoblanco. Madrid, Spain, Felipe.orgaz@icv.csic.es

(P1-6) FORMULATION OF DIELECTRIC INK FOR FABRICATION OF HIGH POWER CERAMIC CAPACITORS BY INK-JET PRINTING PROCESS.

N. Bouvier[1], M. Lejeune[1], F. Rossignol[1], S. Guillemet[2], C. Dossou-Yovo[3], Rémi Noguera[3], and J. Sarrias[4].
[1]SPCTS-UMR 6638, 47 à 73, Avenue Albert Thomas, 87065 Limoges Cedex, France, [2]CIRIMAT-UMR 5085, Université Paul Sabatier, 118, route de Narbonne, 31062 Toulouse Cedex 9, France, [3]CERADROP, 1 avenue d'Ester, BP 36921, 87069 Limoges, France, [4]MARION Technologies, Parc Technologique Delta Sud, 09340 Verniolle, France, nicolas.bouvier@etu.unilim.fr

(P1-7) INKJET PRINTING OF FUNCTIONAL MATERIALS FOR CERAMIC ELECTRONIC APPLICATIONS.

C. Dossou-Yovo[1], M. Mougenot[1], M. Bessaudou[1], N. Bernardin[1] , F. Charifi[1], C. Coquet[1], R. Noguera[1], E. Beaudrouet[2], and M. Lejeune[2],
[a]CERADROP- ESTER Technopole, 1 avenue d'Ester- Porte 16, 87069 Limoges, France, [b]SPCTS-UMR 6638, 47 à 73, Avenue Albert Thomas, 87065 Limoges Cedex, France, c_dossou-yovo@ceradrop.fr

(P1-8) RAPID PROTOTYPING TECHNIQUE FOR CERAMIC MINI-DEVICES CONTAINING INTERNAL CHANNELS WITH ASYMMETRICAL CONTOUR.

R. F. Louh, Y. Ku, and I. Tsai.
Dept. of Materials science and Engineering, Feng China University, Taichung, Taiwan 40724, rflouh@fcu.edu.tw

(P1-9) MICRO POWDER INJECTION MOULDING OF ALUMINA DENTAL BRACKETS.

P. Thomas[1], A. Cervera[2], B. Levenfeld[1], S. Laddha[3], S. Vallury[3], G. Lingam[3], S. Atre[3], and A. Várez[1].
[1]Materials Science and Engineering Department. Universidad Carlos III de Madrid. Avda. de la Universidad, 30. 28911 Leganés. SPAIN, [2]Euroortodoncia. Polígono Industrial Urtinsa. 28923-Alcorcon. SPAIN, [3]Oregon State University. Corvallis, OR 97330. USA, pthomas@ing.uc3m.es

(P1-10) WATER DEBINDING KINETICS OF CERAMIC INJECTION MOULDING FEEDSTOCKS.

V. Dupont[1], C. Delmotte[1], J. P. Erauw[1], F. Cambier[1], T. Boulanger[2], C. Emmerechts[2], B. Guerra[2], and E. Beeckman[2].
[1]Belgian Ceramic Research Centre (BCRC), 4, Avenue Gouverneur Cornez, B-7000 Mons (Belgium), [2]Sirris, 12, Rue du Bois Saint-Jean, B-4102 Seraing, Belgium, v.dupont@bcrc.be, c.delmotte@bcrc.be

(P1-11) ELECTROHYDRODYNAMIC FORMING OF CERAMIC COMPONENTS FROM A PRECERAMIC POLYMER.

P. Colombo[2,3,1], M. Nangrejo[1], E. Bernardo[2], U. Farook[1], Z. Ahmad[1], E. Stride[1], and M. Edirisinghe[1].
[1]Department of Mechanical Engineering, University College London, Torrington Place, London WC1E 7JE, UK, [2]Department of Mechanical Engineering – Materials Division, University of Padova, 35131 Padova, Italy, [3]Department of Materials Science and Engineering, Pennsylvania State University, University Park, PA 16802, USA, paolo.colombo@unipd.it

(P1-12) PROCESSING OF YTTRIA BY GEL-CASTING.

A. L Costa[1], A. Sangiorgi[2], P. Pinasco[1], B. Ballarin[2], and A. Sanson[1].
[1]Institute of Science and Technology for Ceramics (ISTEC-CNR), Via Granarolo 64, 48018 Faenza-Italy, [2]Department of Industrial Chemistry and Materials, University of Bologna, Viale Risorgimento 4, 40136 Bologna – Italy, anna.costa@istec.cnr.it

(P1-13) FABRICATION OF INTERCONNECTED POROUS CERAMIC PARTS BY SELECTIVE LASER GELLING.

F. H. Liu[1] and Y. S. Liao[2].
[1]Department of Mechanical Engineering, Lunghwa University of Sci. and Technol., Taiwan, [2]Department of Mechanical Engineering, National Taiwan University, Taipei, Taiwan, fhliu@mail.lhu.edu.tw

(P1-14) OPTIMIZATION OF FABRICATION PARAMETERS OF CELLULAR ALUMINA STRUCTURES TO BE USED AS FILTERS.

A. M. Montes and J. A. Escobar.
Mechanical Engineering Department, Universidad de los Andes, Bogotá, Colombia, jaiescob@uniandes.edu.co

(P1-15) COLLOIDAL PROCESSING OF MAGNESIUM ALUMINATE SPINEL DENSE BODIES.

P. Pinho, A. B. Lopes, and M. M. Almeida.
Department of Ceramic and Glass Engineering, CICECO, University of Aveiro, 3810-193 Aveiro, Portugal, augusto@ua.pt

(P1-16) OPTIMIZATION OF CUPRATE BARIUM POWDER SLIP FOR TAPE CASTING.

H. Amaveda[1], M. Mora[1], A. Sotelo[1], C. Cardiel[1], L. A. Angurel[1], and R. Moreno[2].
[1]ICMA (CSIC-Universidad de Zaragoza), c/ María de Luna 3, 50018 Zaragoza, Spain, [2]Instituto de Cerámica y Vidrio, CSIC, c/ Kelsen, 5, 28049 Madrid, Spain, hippo@unizar.es

(P1-17) TAPE CASTING OF CLAY BASED COMPOSITIONS FOR TILES.

F. Rubio-Marcos[1], J. J. Reinosa[1], E. Solera[1], M.A. Bengochea[2], and J. F. Fernández[1].
[1]Electroceramic Department, Instituto de Cerámica y Vidrio, CSIC 28049 Madrid, Spain, [2]Keraben S.A. 12520 Nules Castellón, Spain, frubio@icv.csic.es

(P1-18) TWO ALTERNATIVE ROUTES FOR STARCH CONSOLIDATION OF MULLITE GREEN BODIES.
M. H. Talou and M. A. Camerucci.
Lab. de Materiales Estructurales - INTEMA, Fac. de Ingeniería - UNMdP - CONICET (7600) Mar del Plata, Argentina, mtalou@fi.mdp.edu.ar

(P1-19) UNIFORMED POWDER COMPACTS FABRICATED FROM AIR DRY FORMING METHOD USING CONDENSED SLURRIES WITH ADDITION OF GLYCEROL.
S. Tanaka, R. Furushima, and K. Uematsu.
Nagaoka University of Technology, 1603-1 Kamitomioka, Nagaoka Niigata 9402188 Japan, uematsu@vos.nagaokaut.ac.jp

(P1-20) PRODUCTION OF POROUS CERAMICS AND HOLLOW CAPSULES FROM PARTICLE-STABILIZED EMULSIONS.
E. Tervoort, I. Akartuna, A.R. Studart, and L. J. Gauckler.
ETH, Department of Materials, Wolfgang-Pauli-Strasse 10, CH-8093, Zurich, Switzerland, elena.tervoort@mat.ethz.ch

(P1-21) STUDY OF Al_2O_3-TiO_2 GRANULES OBTAINED BY FREEZE-DRYING PROCESS.
M. Vicent[1], E. Sánchez[1], R. Moreno[2], and M. I. Nieto[2].
[1]Instituto de Tecnología Cerámica, Castellón, Spain, [2]Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, monica.vicent@itc.uji.es

(P1-22) USE OF EXTRUSION TECHNOLOGY FOR OBTAINING OF DENSE TITANIUM OXIDE CERAMICS.
A. Pavlova, J. Locs, R. Neretnieks, and L.Berzina-Cimdina
Riga Technical University, Riga Biomaterials Innovation and Development Centre, Pulka Street 3/3, Riga, LV-1007, Latvia, agnese.pavlova@rtu.lv

(P1-23) CONTINUOUS EXTRUSION OF SUSPENSIONS OF NATURAL ZEOLITES.
G. Zacahua-Tlacuatl[1], J. Pérez-González[2], J. J. Castro-Arellano[1], and H. Balmori-Ramírez[1].
[1]Sección de Estudios de Posgrado, ESIQIE-IPN, Edif. 8, 3er piso, C. P. 07738, México D. F., Mexico, [2]Laboratorio de Reología, Escuela Superior de Física y Matemáticas, Instituto Politécnico Nacional, Apdo. Postal 118-209, C. P. 07051, México D. F., Mexico, hbalmori@ipn.mx

(P1-24) SYNTHESIS OF CERAMIC NANOPARTICLES BY LASER ABLATION IN LIQUIDS
M. Oujja[1], M. Sanz[1], M. Castillejo[1], G. Gómez[2], R. Moreno[2], and J.C. Fariñas[2]
[1]Instituto de Química Física Rocasolano, CSIC, 28006 Madrid, Spain, [2]Instituto de Cerámica y Vidrio, CSIC, 28049 Madrid, Spain, *jcfarinas@icv.csic.es*

17:00 - 17:15 h Coffee Break

17:15 – 19:00 h **Student Contest (SC1)**

Chair persons: A. Segadaes &. C. Baudín

(SC1-1) CHEMICAL STABILITY OF $CoAl_2O_4$ BLUE PIGMENT IN AQUEOUS SUSPENSIONS.
S. Akdemir, E. Ozel, and E. Suvacı.
Department of Materials Science and Engineering, Anadolu University, Eskisehir, Turkey, semakdemir@gmail.com

(SC1-2) MONOSACCHARIDES DERIVATIVES AS MONOMERS IN GELCASTING PROCESS.
P. Bednarek[1], M. Szafran[1], T. Mizerski[1], Y. Sakka[2].
[1]Warsaw University of Technology, Faculty of Chemistry, Warsaw, Poland, [2]Fine Particle Processing Group, Nano Ceramics Center, National Institute for Materials Science, Tsukuba, Ibaraki, Japan, bednarek@ch.pw.edu.pl

(SC1-3) WATER BASED SYNTHESIS AND DISPERSION OF $Ni(OH)_2$ NANOPARTICLES.
S. Cabanas-Polo, O. Burgos-Montes, and A. J. Sanchez-Herencia.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, scabanas@icv.csic.es

(SC1-4) DEFLOCCULATION OF NANOZIRCONIA POWDERS BY MEANS OF MONOSACCHARIDES ADDITION.
A. Danelska, M. Szafran, and E. Bobryk.
Warsaw University of Technology, Faculty Of Chemistry, Warsaw, Poland, anna.danelska@gmail.com

(SC1-5) SPRAY DRYING OF TiO_2 NANOPARTICLES INTO REDISPERSIBLE GRANULES.
B. Faure[1], J. S. Lindeløv[2], M. Wahlberg[2], N. Adkins[3], P. Jackson[3], and L. Bergström[1].
[1]Materials Chemistry Research Group, Department of Physical, Inorganic and Structural Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, Sweden, [2]Niro A/S, Gea Process Engineering Division, Søborg, Denmark, [3]CERAM Research Ltd., Penkhull, Stoke-On-Trent, Staffordshire, United Kingdom, bertrand@inorg.su.se

(SC1-6) ELECTROCONDUCTED ASSEMBLY OF NANO-YSZ AND SCANDIA - DOPED YSZ PREPARED BY MILD – HYDROTHERMAL SYNTHESIS.
I. Gonzalo-Juan, M. T. Colomer, and B. Ferrari.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, igonzalo@icv.csic.es

(SC1-7) POWDER CONDITIONING FOR THERMAL SPRAYING PROCESSES.
J. Guimarães, E. Garcia, P. Miranzo, and M. I. Osendi.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, joana.queiroz@icv.csic.es

(SC1-8) HOLLOW SPHERICAL TiO_2-BASED PHOTOCATALYSTS PREPARED BY SPRAY PYROLYSIS.
B. Haugen[1], C. Simon[2], I. Kumakiri[2], and M. A. Einarsrud[1].
[1]Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway, [2]SINTEF Materials and Chemistry, Oslo, Norway, astribjo@stud.ntnu.no

(SC1-9) RHEOLOGICAL BEHAVIOUR OF ZIRCONIA AND TITANIA SUSPENSIONS TO SYNTHESIZE ZIRCONIUM TITANATE-BASED COMPOSITES.
E. López-López, C. Baudín, and R. Moreno.
Instituto de Cerámica y Vidrio, CSIC, C/ Kelsen 5, 28049, Madrid, Spain, emilioll@icv.csic.es

(SC1-10) WATER BASED PROCESSING OF NANO Y_2O_3 DISPERSED HYDROXYAPATITE COMPOSITES.
P. Parente[1], O. Burgos-Montes[2], M. A. Auger[1], M. A. Monge[1], and A. J. Sánchez-Herencia[2].
[1]Physic Department, Universidad Carlos III Madrid, Leganés, Madrid, Spain, [2]Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, pparente@fis.uc3m.es

(SC1-11) SLIP PREPARATION FOR BIOCERAMICS CONTAINING MACROPORES.
N. Pawlak[1], M. Kelleher[1], and S. Hampshire[2].
[1]School of Manufacturing and Design Engineering, Dublin Institute of Technology, Dublin, Ireland. [2]Materials and Surface Science Institute, University of Limerick, Limerick, Ireland, natalia.pawlak@student.dit.ie

(SC1-12) RHEOLOGY OF UV CURABLE COLLOIDAL SILICA DISPERSIONS FOR RAPID PROTOTYPING APPLICATIONS.
M. Wozniak[1,2], Y. Hazan[1] T. Graule[1], and D. Kata[2].
[1]EMPA, Swiss Federal Laboratories for Materials Testing and Research, Laboratory for High Performance Ceramics, Dübendorf, Switzerland, [2]University of Science and Technology, Department of Technology of Ceramics and Refractories, Krakow, Poland, wozniak@agh.edu.pl

TUESDAY 17th November

Session 3 (S3) *Chair persons: F. Cambier &. I. Santacruz*

08:30 - 09:00 h **Invited Lecture (IL5)**

POROUS CERAMICS FOR GAS AND BIOMOLECULE SEPARATION.
L. Bergström.
Materials Chemistry Research Group, Department of Physical, Inorganic and Structural Chemistry, Arrhenius Laboratory, Stockholm University, Sweden, lennartb@inorg.su.se

SHAPING-4 CONFERENCE. Preliminary programme.

09:00 - 09:30 h **Invited Lecture (IL6)**
NOVEL PROCESSING AND FORMING OF BIOMATERIALS.
M. Edirisinghe.
Department of Mechanical Engineering, University College London, UK, m.edirisinghe@ucl.ac.uk

09:30 - 09:45 h (S3-1) AN X-RAY TOMOGRAPHY STUDY OF AGGLOMERATE BREAKDOWN DURING PASTE FLOW.
P. McGuire, S. Welch, K. Harrison, Y. O. Ayanlowo, S. Odukogbe, and S. Blackburn.
IRC in Materials Processing and School of Chemical Engineering, University of Birmingham, Edgbaston, Birmingham, UK, s.blackburn@bham.ac.uk

09:45 - 10:00 h (S3-2) SYNTHESIS, COLLOIDAL STABILITY, PHOTOCATALYTIC AND ANTIMICROBIAL PROPERTY OF Ag-DEPOSITED TiO_2 COMPOSITE NANOPARTICLES.
C. N. Chen, W. C. Lin, and W. J. Tseng.
Department of Materials Science and Engineering, National Chung Hsing University, Taichung, Taiwan, wenjea@dragon.nchu.edu.tw

10:00 - 10:15 h (S3-3) ELECTROPHORETIC DEPOSITION OF ADVANCED FUNCTIONAL CERAMICS INTO COMPLEX SHAPES AND CONFIGURATIONS.
J. Ma.
School of Materials Science and Engineering, Nanyang Technological University, Singapore, asjma@ntu.edu.sg

10:15 - 10:30 h (S3-4) CO-EXTRUSION OF MULTILAYERED CERAMIC MICRO-TUBES.
J. Powell[1] and S. Blackburn[2].
[1]Department of Metallurgy and Materials Science. [2]Department of Chemical Engineering, University of Birmingham, Edgbaston, Birmingham, UK, jdapowell@hotmail.com

10:30 - 10:45 h (S3-5) POROUS ALUMINA CERAMICS PREPARED WITH WHEAT FLOUR.
E. Gregorová, W. Pabst, and Z. Živcová.
Institute of Chemical Technology (ICT Prague), Prague, Czech Republic, pabstw@vscht.cz

10:45 - 11:00 h (S3-6) OSMOTIC DRYING OF GELCASTED BODIES PREPARED FROM FINE ALUMINA POWDER.
M. Trunec.
Department of Ceramics and Polymers, Brno University of Technology, Brno, Czech Republic, trunec@fme.vutbr.cz

11:00 - 11:30 h Coffee Break

SHAPING-4 CONFERENCE. Preliminary programme.

Session 4 (S4) *Chair persons: P. Colombo &. M.T. Colomer*

11:30 – 12:00 h **Invited Lecture (IL7)**
CAPSULES AND FOAMS FROM NANOPARTICLES.
L. J. Gauckler, I. Akartuna, E. Teervort, and U. Gonzenbach.
Inorganic Nonmetallic Materials, ETH Zurich; ,Department Materials Science, Zurich, Switzerland, ludwig.gauckler@mat.ethz.ch

12:00 - 12:15 h (S4-1) PREPARATION AND PROPERTIES OF ULTRAHIGHLY POROUS SILICON CARBIDE.
M. Fukushima, Y. Zhou, and Y. Yoshizawa.
Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Moriyama-ku Nagoya, Japan, manabu-fukushima@aist.go.jp

12:15 - 12:30 h (S4-2) ICE TEMPLATING :A VERSATILE PROCESS TO PRODUCE FUNCTIONALLY GRADED CERAMIC FILTER MEDIA.
C. Delmotte, M. Tabata, G. Bister, J.P. Erauw, and F. Cambier.
Belgian Ceramic Research Centre (BCRC), Mons, Belgium, c.delmotte@bcrc.be

12:30 - 12:45 h (S4-3) POROUS ECOMATERIALS BASED ON INDUSTRIAL WASTE AND WOOD TO BUILDING MATERIALS.
E. Prud'homme, P. Michaud, and S. Rossignol.
Groupe d'Etude des Matériaux Hétérogènes (GEMH-ENSCI) Ecole Nationale Supérieure de Céramique Industrielle, Limoges, France, sylvie.rossignol@unilim.fr

12:45 - 13:00 h (S4-4) POROUS POLYMER DERIVED CERAMIC COMPOSITES DECORATED WITH IN-SITU GROWN NANO-STRUCTURES.
C. Vakifahmetoglu[1], J. Woltersdorf[2], E. Pippel[2], and P.Colombo[1].
[1]University of Padova, Dipartimento di Ingegneria Meccanica – Settore Materiali, Padova, Italy. 2Department of Materials Science and Engineering, The Pennsylvania State University, PA, USA. 2Max Planck Institut für Mikrostrukturphysik, Halle, Germany, cekdar@unipd.it

13:00 - 13:15 h (S4-5) POLYMER DERIVED CERAMICS FOR BEARING APPLICATIONS.
L. Schlier[1], M. Steinau[1], N. Travitzky[1], J. Gegner[2], and P. Greil[1].
[1]Department of Materials Science, Institute of Glass and Ceramics, Erlangen, Germany. [2]SKF GmbH, Schweinfurt, Germany, nahum.travitzky@ww.uni-erlangen.de

13:15 - 13:30 h (S4-6) JOINING OF PRECERAMIC PAPERS FOR THE PRODUCTION OF FILTER SYSTEMS.
B. Gutbrod[1], N. Travitzky[1], C. Sorg[2], A. Hofenauer[2], and P. Greil[1].
[1]Department of Materials Science, Institute of Glass and Ceramics, Erlangen, Germany. [2]Paper Technology Specialists (PTS), Munich, Germany, nahum.travitzky@ww.uni-erlangen.de

13:30 - 15:00 h Lunch

Session 5 (S5) *Chair persons: G.L. Messing &. A.J. Sánchez-Herencia*

15:00 – 15:30 h **Invited Lecture (IL8)**
POROUS CERAMIC STRUCTURES AS A TOOL FOR MANY APPLICATIONS.
J. Luyten, S. Mullens, F. Snijkers, M. Snel, and P. Nuyts.
Materials Technology, VITO, Mol, Belgium, jan.luyten@vito.be

15:30 - 15:45 h (S5-1) TAPE CAST POROSITY-GRADED PIEZOELECTRIC CERAMICS.
E. Mercadelli, A. Sanson, P. Pinasco, E. Roncari, and C. Galassi.
Institute of Science and Technology for Ceramics, National Research Council, CNR-ISTEC, Faenza, Italy, elisa.mercadelli@istec.cnr.it

15:45 - 16:00 h (S5-2) A NOVEL TEMPLATED GRAIN GROWTH APPROACH FOR THE PROCESSING OF ⟨001⟩-TEXTURED PMN-PT CERAMICS.
H. Amorín[1], J. Ricote[1], I. Santacruz[2,3], R. Moreno[2], J. Holc[4], M. Kosec[4], P. Ramos[5], D. Chateigner[6], and M. Algueró[1].
[1]Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain. [2]Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain. [3]University of Málaga, Málaga, Spain. [4]Jozef Stefan Institute, Ljubljana, Slovenia. [5]Dpto. de Electrónica, Universidad de Alcalá, Alcalá de Henares, Spain. [6]Laboratoire de Cristallographie et Sciences de Matériaux, ENSICAEN, Caen, France, hamorin@icmm.csic.es

16:00 - 16:15 h (S5-3) PROCESSING AND CHARACTERIZATION OF TEXTURED MULLITE CERAMICS FROM PHYLLOSILICATES.
S. Deniel[1], N. Tessier-Doyen[1], C. Dublanche-Tixier[2], D. Chateigener[3], and P. Blanchart[1].
[1]GEMH, ENSCI, Limoges, France, [2]ENSIL- SPCTS UMR CNRS, Limoges, France, [3]CRISMAT- ENSICAEN and IUT Caen, Université de Caen Basse Normandie, Caen, France, sarah.deniel@etu.unilim.fr

16:15 - 16:30 h (S5-4) ELABORATION OF $La_{1-X}Sr_XFe_{1-Y}Ga_YO_{3-\Delta}$ MULTILAYER MEMBRANE WITH Sr SUBSTITUTION GRADIENT BY TAPE-CASTING AND CO-FIRING.
P.M. Geffroy[1], A. Vivet[1,2], A. Julian[1,2], E. Juste[1,2], V. Coudert[1], P. Del Gallo[2], N. Richet[2], and T. Chartier[1].
[1]CNRS-ENSCI, SPCTS, Limoges, France. [2]Air Liquide, Centre de Recherche Claude-Delorme, Les Loges-en-Josas, Jouy-en-Josas, France, pierre-marie.geffroy@unilim.fr

16:30 - 16:45 h (S5-5) PROCESSING ROUTE TO GENERATE AND DIRECTLY TAPE CAST NANO-SIZED α-Al_2O_3 POWDERS.
P. Vozdecky[1], A. Roosen[1], C. Knieke[2], and W. Peukert[2].
[1]University of Erlangen-Nuremberg, Department of Materials Science, Institute of Glass and Ceramics, Erlangen, Germany. [2]University of Erlangen-Nuremberg, Department of Chemical and Biological Engineer-ing, Institute of Particle Technology, Erlangen, Germany, pavel.vozdecky@ww.uni-erlangen.de

16:45 - 17:00 h (S5-6) A MULTI-SCALE SIMULATION MODEL FOR TAPE CASTING.
A. Wonisch, T. Kraft, M. Moseler, and H. Riedel.
Fraunhofer Institute for Mechanics of Materials, Freiburg, Germany, andreas.wonisch@iwm.fraunhofer.de

17:00 - 17:15 h Coffee Break

17:15 – 19:00 h **Student Contest (SC2)**

Chair persons: C. Galassi &. C. Baudín

(SC2-1) SHAPING AND DENSIFICATION OF β-TRICALCIUM PHOSPHATE BIOCERAMICS.
E. Constantin-Rguiti[1,2,3], J-C. Hornez[1,2], M. Poorteman[4], J. Lu[3], F. Cambier[4], M. Descamps[1,2], and A. Leriche[1,2].
[1]Université Lille Nord de France, Lille, France. [2]Laboratoire des Matériaux et Procédés, Université Lille Nord de France, Maubeuge, France. [3]Biocétis SARL, Cournonsec, France. [4]Belgian Ceramic Research Centre, Mons, Belgium, emmanuelle.rguiti@univ-valenciennes.fr

(SC2-2) PROCESSING OF CARBON NANOTUBES CONTAINING SILICON NITRIDE NANOCOMPOSITES.
J. González-Julián, P. Miranzo, M.I. Osendi, and M. Belmonte.
Institute of Ceramics and Glass, CSIC, Madrid, SPAIN, jgonzalez@icv.csic.es

(SC2-3) BINDER DISTRIBUTION DURING WICK-DEBINDING OF CERAMIC PARTS PREPEARED BY LPIM.
L. Gorjan, A. Dakskobler, and *T. Kosmač.*
Institut Jožef Stefan, Ljubljana, Slovenia, lovro.gorjan@gmail.com

(SC2-4) OPEN-CELL CERAMIC FOAM STRUCTURES PRODUCED BY DIRECT FREEZE FOAMING.
A. Müller and T. Moritz.
Fraunhofer Institute for Ceramic Technologies and Systems, Dresden, Germany, Axel.Mueller@ikts.fraunhofer.de

(SC2-5) ELECTROPHORETIC SHAPING WITH COAXIAL ELECTRODES.
A. Nold and R. Clasen.
Saarland University, Saarbruecken, Germany, a.nold@nanotech.uni-saarland.de

(SC2-6) INCORPORATION OF SEPIOLITE FIBER CONTAINING t-ZIRCONIA NANOPARTICLES TO A CERAMIC GLAZE.
R. Pina-Zapardiel[1], A. Esteban-Cubillo[2], J. F. Bartolomé[1], C. Pecharromán[1], and J.S.Moya[1].
[1]Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain. [2]Tolsa S.A., raul.pina@icmm.cisc.es

(SC2-7) PROGRESS IN THE ELECTROPHORETIC DEPOSITION (EPD) OF BIOACTIVE GLASS AND BIOACTIVE GLASS-BIOPOLYMER COMPOSITE COATINGS.
F. Pishbin, A. Simchi, M. P. Ryan, and A. R. Boccaccini.
Department of Materials, Imperial College London, London, UK, fatemehsadat.pishbin07@imperial.ac.uk

(SC2-8) EFFECT OF SHAPING TECHNIQUE ON SINTERED DENSITIES OF SILICON CARBIDE.
K. Rade, S. Novak, and S. Kobe.
Jožef Stefan Institute, Ljubljana, Slovenia, katja.rade@ijs.si

(SC2-9) PROCESSING AND TAPE CASTING FROM COLLOIDAL SUSPENSIONS OF DOPED LANTHANUM CHROMITE SYNTHESIZED BY COMBUSTION SYNTHESIS.
L.F.G. Setz[1], S.R.H. Mello-Castanho[1], I. Santacruz[2,3], M.T. Colomer[2], and R. Moreno[2].
[1]Instituto de Pesquisas Energéticas e Nucleares - IPEN/CNEN – Brasil. [2]Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, [3]University of Málaga, Málaga, Spain, lfsetz@yahoo.com.br

(SC2-10) NOVEL STRATEGIES TO PRODUCE HIGH SPECIFIC SURFACE AREA CERAMIC FOAMS FROM PRECERAMIC POLYMERS.
C. Vakifahmetoglu and P. Colombo.
Dipartimento di Ingegneria Meccanica – Settore Materiali, Università di Padova, Padova, Italy, cekdar@unipd.it

(SC2-11) ZnO-BASED THIN FILMS BY EPD.
M. Verde, M. Peiteado, A. C. Caballero, M. Villegas, and B. Ferrari.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, mverde@cv.csic.es

21:00 - 23:30 *Conference Dinner*
Restaurante El Espejo.
Paseo de Recoletos, 31, 28004 Madrid
www.restauranteelespejo.com

SHAPING-4 CONFERENCE. Preliminary programme.

WEDNESDAY 18th November

Session 6 (S6) *Chair persons: K. Uematsu &. E. Sánchez-Vilches*

08:30 - 09:00 h **Invited Lecture (IL9)**
COMPLEX SHAPE FORMING USING CROSSLINKABLE POLY-VINYL ALCOHOL (PVA).
G. V. Franks.
Chemical and Biomolecular Engineering, University of Melbourne, Australia, gvfranks@unimelb.edu.au

09:00 - 09:30 h **Invited Lecture (IL10)**
MICROSTRUCTURAL REQUIREMENTS AND IN SITU PROCESSING FOR ALUMINA MATRIX NANOCOMPOSITES.
R. I. Todd and A. Mukhopadhyay.
University of Oxford, Department of Materials, Parks Road, Oxford OX1 3PH, UK, richard.todd@materials.ox.ac.uk

09:30 - 09:45 h (S6-1) TEMPLATED GRAIN GROWTH AND PROPERTIES OF BIOINSPIRED CERAMIC MICROSTRUCTURE COMPOSITES.
R.J. Pavlacka and G.L. Messing.
Pennsylvania State University, University Park, PA USA, messing@matse.psu.edu

09:45 - 10:00 h (S6-2) PREPARATION OF HIGH SOLIDS CONTENT NANOTITANIA SUSPENSIONS FOR ATMOSPHERIC PLASMA SPRAYING.
M. Vicent[1], E. Sánchez[1], R. Moreno[2], I. Santacruz[2], M. D. Salvador[3], and V. Bonache[3].
[1]Instituto de Tecnología Cerámica (ITC) - Asociación de Investigación de las Industrias Cerámicas (AICE). Universitat Jaume I. Castellón, Spain. [2]Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain. [3]Instituto de Tecnología de Materiales, Universidad Politécnica de Valencia, Valencia, Spain, monica.vicent@itc.uji.es

10:00 - 10:15 h (S6-3) MULLITE COATINGS ON CERAMIC SUBSTRATES: STABILISATION OF Al_2O_3-SiO_2 SUSPENSIONS FOR SPRAY DRYING OF COMPOSITE GRANULES SUITABLE FOR REACTIVE PLASMA SPRAY.
A. Schrijnemakers[1], S. André[2], G. Lumay[3], N. Vandewalle[3], F. Boschini[1], R. Cloots[1], and B. Vertruyen[1].
[1]LCIS/CMI, Chemistry Institute B6, University of Liège, Liège Belgium. [2]BCRC, Belgian Ceramic Research Center, Mons Belgium. [3]APTIS/GRASP, Physic Institute B5, University of Liège, Liège Belgium, a.schrijnemakers@student.ulg.ac.be

10:15 - 10:30 h (S6-4) MEASUREMENT OF BULK DENSITY DISTRIBUTION IN LARGE CERAMIC TILES BY A NON-DESTRUCTIVE METHOD.
J. L. Amorós, J. Boix, D. Llorens, G. Mallol, I. Fuentes, and C. Feliu.
Instituto de Tecnología Cerámica. Asociación de Investigación de las Industrias Cerámicas. Universitat Jaume I. Campus Universitario Riu Sec. Castellón (Spain), jboix@itc.uji.es

10:30 - 10:45 h (S6-5) DESIGNING PARTICLE SIZING AND PACKING FOR FLOWABILITY AND SINTERED MECHANICAL STRENGTH.
A. P. Silva[1], D. G. Pinto[1], A. M. Segadães[2], and T.C. Devezas[1].
[1]Dept. Electromechanical Eng., University of Beira Interior, Covilhã, Portugal. [2]Dept. Ceramics and Glass Eng. (CICECO), University of Aveiro, Aveiro, Portugal, abilio@ubi.pt

CANCELLED (S6-6) STUDY OF SHAPING CONDITIONS OF ALUMINOSILICATES BASED SLABS.
L. Esposito and A. Salomoni.
Centro Ceramico Bologna, Bologna, Italy, salomoni@cencerbo.it

11:00 - 11:30 h Coffee Break

Session 7 (S7) *Chair persons: J. Heinrich &. A.C. Caballero*

11:30 – 12:00 h **Invited Lecture (IL11)**
FABRICATION OF HIGHLY STRUCTURE CONTROLLED CERAMICS THROUGH ADVANCED COLLOIDAL PROCESSING.
Y. Sakka, T. S. Suzuki, and T. Uchikoshi.
Nano Ceramics Center, National Institute for Materials Science, Tsukuba, Ibaraki, Japan, SAKKA.Yoshio@nims.go.jp

12:00 - 12:15 h (S7-1) PRESSURELESS SINTERING OF Ti_3SiC_2 POWDER.
B. B. Panigrahi[1], J. J. Gracio[1], M. Chu[2], and S. Cho[2].
[1]Center for Mechanical Technology and Automation, Department of Mechanical Engineering, University of Aveiro, Aveiro, Portugal, [2]Division of Advanced Technology, Korea Research Institute of Standards and Science, Yuseong, Daejeon, Republic of Korea, panigrahi14@yahoo.com

12:15 - 12:30 h (S7-2) SPARK PLASMA SINTERING OF Si-BASED CERAMICS.
M. Belmonte, J. Gonzalez-Julian, P. Miranzo, and M. I. Osendi.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, mbelmonte@icv.csic.es

12:30 - 12:45 h (S7-3) POROUS MULLITE MATERIALS WITH VERY LOW THERMAL CONDUCTIVITY.
P. Miranzo, E. Garcia, and M.I. Osendi.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, miosendi@icv.csic.es

12:45 - 13:00 h (S7-4) PRODUCTION OF β-SiAlON CERAMICS WITH LOW AMOUNT OF ADDITIVE AT LOW SINTERING TEMPERATURE.
O. Eser[1], S. Kurama[1], and G. Gunkaya[2].
[1]Graduate School of Sciences, Department of Advanced Technologies, Anadolu University, Eskisehir, Turkey. [2]Department of Materials Science and Engineering, Anadolu University, Eskisehir, Turkey, skurama@anadolu.edu.tr

13:00 - 13:15 h (S7-5) SINTERING OF POWDERS IN THE $CrSi_2$–Ti (Ta)Si_2 SYSTEMS DEPENDING ON THE METHODS OF SYNTHESIS.
I. Uvarova, I.Kud', L. Yeremenko, L. Lykhodid, and D. Ziatkevich
I.Frantsevych Institute for Problems of Materials Science of NAS, Kyiv, 03142 Ukraine, uvarova@ipms.kiev.ua

13:15 - 13:30 h (S7-6) THE FABRICATION OF POROUS CERAMIC ELECTRODES FOR APPLICATIONS IN ELECTROCHEMISTRY.
E. Chavez, L. Jones, J. A. Diez, J. Etxeberria.
CIDETEC -Centre for electrochemical technologies, Parque tecnológico de San Sebastián, Spain; CEIT, San Sebastián, Spain, echavez@cidetec.es

13:30 - 15:00 h Lunch

Session 8 (S8) *Chair persons: A. Boccaccini &. B. Ferrari*

15:00 – 15:30 h **Invited Lecture (IL12)**
POWDER PROCESSING WITH LASERS AS ENERGY SOURCE.
J. Günster[1], C. Oelgardt[2], X. Tian[2], and J. G. Heinrich[2].
[1]CIC Ceramic Institute Clausthal GmbH, Clausthal-Zellerfeld, Germany, [2]Clausthal University of Technology, Clausthal-Zellerfeld, Germany, jens.guenster@oerlikon.com

15:30 - 15:45 h (S8-1) PROGRESS IN THE ELECTROPHORETIC DEPOSITION OF CARBON NANOTUBES (CNT) AND CNT/ NANOPARTICLES COMPOSITES.
A. R. Boccaccini.
Department of Materials, Imperial College London, London, UK and Institute of Biomaterials, University of Erlangen-Nuremberg, Erlangen, Germany, a.boccaccini@imperial.ac.uk

15:45 - 16:00 h (S8-2) ELECTROPHORETIC DEPOSITION OF STRUCTURED COATINGS.
R. Clasen.
Saarland University, Campus C6 3, D-66123 Saarbruecken, Germany, r.clasen@nanotech.uni-saarland.de

16:00 - 16:15 h (S8-3) ELECTROPHORETIC DEPOSITION OF SIALON PHOSPHOR PARTICLES FOR PACKAGING OF FLAT PSEUDO-WHITE LIGHT EMITTING DEVICES.
T. Uchikoshi[1], T. Kitabatake[1,2] F. Munakata[2], Y. Sakka[1], and N. Hirosaki[1].
[1]Nano Ceramics Center, National Institute for Materials Science, Tsukuba, Ibaraki, Japan. [2]Department of Energy Science and Nuclear Engineering, Tokyo City University. Tokyo, Japan, uchikoshi.tetsuo@nims.go.jp

16:15 - 16:30 h (S8-4) ELECTRIC FIELD ASSISTED FORMING OF CNT-SiC$_f$/SiC COMPOSITE.
S. Novak[1], K. König[1], A. Ivekovič[1], and A.R. Boccaccini[2].
[1]Department for Nanostructured Materials, Jožef Stefan Institute, JLjubljana, Slovenia. [2]Department for Materials, Imperial College, London, UK, sasa.novak@ijs.si

16:30 - 16:45 h (S8-5) ELECTROSTATIC AND KINETIC ASPECTS OF ELECTROPHORETIC DEPOSITION OF CERAMIC MATERIALS.
C. Baldisserri, D. Gardini, and C. Galassi.
ISTEC – CNR, via Granarolo 64, 48018 Faenza (RA), Italy, carlo.baldisserri@istec.cnr.it

16:45 - 17:00 h (S8-6) LEAD MAGNESIUM NIOBATE-LEAD TITANATE THICK FILMS PREPARED BY ELECTROPHORETIC DEPOSITION
D. Kuscer and M. Kosec.
Jožef Stefan Institute, Jamova 39, SI-1000 Ljubljana, Slovenia, danjela@ijs.si

17:00 - 17:15 h (S8-7) ELECTRICALLY DRIVEN ARRANGEMENT OF SILICA MESO-POROUS COATINGS.
Y. Castro, M. Servera, A. Duran, and B. Ferrari.
Instituto de Cerámica y Vidrio, CSIC, Madrid, Spain, castro@icv.csic.es

17:15 – 18:45 h **Poster Session-2 (P2)**

(P2-1) MINERALOGICAL AND IONIC CONDUCTIVITY STUDY OF BENTONITE.
M. Ayadi[1] and N. K. Ariguib[2].
[1]Faculté des Sciences de Bizerte, 7021 Zarzouna Bizerte, Tunisia, [2]Laboratory of Materials, Centre de Recherches et des Technologies de l'Energie, B.P. 95, 2050 Hammam-Lif, Tunisia, mounirayadi@yahoo.fr

(P2-2) SELECTIVE LASER HEAT TREATMENTS FOR REALIZING COATINGS AND THIN ELECTRIC COMPONENTS – PART 1: SILVER CONDUCTOR FABRICATION ON GLASS AND ALUMINA SUBSTRATES.
F. Petit[1], C. Ott[1], F. Cambier[1], N. Basile[2], and M. Gonon[2].
[1]Belgium Ceramic Research Centre, 4, Avenue du Gouverneur Cornez, B- 7000 Mons, [2]Faculté Polytechnique de Mons, Service de Science des Matériaux, 56, Rue de l'Epargne, B-7000 Mons, f.petit@bcrc.be, c.ott@bcrc.be

(P2-3) SELECTIVE LASER HEAT TREATMENTS FOR REALIZING COATINGS AND THIN ELECTRIC COMPONENTS – PART 2: SINTERING OF $BATiO_3$ BY SLS (SELECTIVE LASER SINTERING).
N. Basile[1], M. Gonon[1], C. Ott[2], F. Petit[2], and F. Cambier[2].
[1]Faculté Polytechnique de Mons, Service de Science des Matériaux, 56, Rue de l'Epargne, B-7000 Mons, [2]Belgium Ceramic Research Centre, 4, Avenue du Gouverneur Cornez, B- 7000 Mons, maurice.gonon@umons.ac.be, natanael.basile@umons.ac.be

(P2-4) SELECTIVE LASER HEAT TREATMENTS FOR REALIZING COATINGS AND THIN ELECTRIC COMPONENTS – PART 3: MELTING AND CRYSTALLIZATION OF A PIEZOELECTRIC GLASS CERAMIC.

N. Basile[1], M. Gonon[1], C. Ott[2], F. Petit[2], and F. Cambier[2].
[1]Faculté Polytechnique de Mons, Service de Science des Matériaux, 56, Rue de l'Epargne, B-7000 Mons, [2]Belgium Ceramic Research Centre, 4, Avenue du Gouverneur Cornez, B- 7000 Mons, maurice.gonon@umons.ac.be, natanael.basile@umons.ac.be

(P2-5) STABILIZATION OF AQUEOUS $BaCO_3$ SLURRIES AND COATING ON DENSE Y-TPZ SUBSTRATES FOR MAKING $BaZrO_3$ LAYERS BY THERMAL TREATMENT.

F. Boschini[1], A. Rulmont[1], B. Vertruyen[1], R. Cloots[1], and R. Moreno[2].
[1]Laboratory of Structural Inorganic Chemistry, Department of Chemistry -University of Liège, Allée de la chimie, 3-B6a, B-4000 Liège, Belgium, [2]Instituto de Cerámica y Vidrio, CSIC, c/ Kelsen, 5, Campus de Cantoblanco, E-28049 Madrid, Spain, frederic.boschini@ulg.ac.be

(P2-6) UTILIZATION OF NIGERIAN SANDS FOR GLASS CERAMIC COATINGS.

P. Chukwu[1], M. Muntean[2], and O. Dumitrescu[2].
[1]Anambra State University, Department of Pure and Industrial Chemistry P.O.Box 2 ,Uli. Anambra State, Nigeria, [2]Politehnical University of Bucharest, Department of Material Oxide 1 – 3 Polizu Bucharest, Romania, phimmainvestment@yahoo.co.uk

(P2-7) PREPARATION OF $YBa_2Cu_3O_{7-x}$ SUPERCONDUCTING THICK FILMS ON METALLIC SUBSTRATES BY THE ELECTROPHORETIC DEPOSITION (EPD) TECHNIQUE.

R. Closset[1,2], F. Boschini[1], B. Vertruyen[1], M. Dirickx[2], and R. Cloots[1].
[1]Laboratory of Structural Inorganic Chemistry, Department of Chemistry, University of Liège, Sart-Tilman, B-4000 Liège, Belgium, [2] Royal Military Academy, CISS department, Brussels, Belgium, Raphael.Closset@ulg.ac.be

(P2-8) MULTILAYER COATINGS OBTAINED BY COMBINATION OF PVD, CVD AND DIP-COATING TECHNIQUES.

A. Díaz-Parralejo[1], J. Sánchez-González[1], M. A. Díaz-Díez[1], A. Macías-García[1], and E. M. Cuerda-Correa[2].
[1]Dpto. Ingeniería Mecánica, Energética y Materiales. Univ. de Extremadura. Spain, [2]Dpto. Química Inorgánica. Univ. de Extremadura. Spain, adiazpar@unex.es

(P2-9) ZIRCONIA COATINGS PREPARED BY EPD FROM SOL-GEL SOLUTIONS.

A. Díaz-Parralejo[1], J. Sánchez-González[1], J. L. Pantoja-Pertegal[1], J. M. González-Moreno[1], and E. M. Cuerda-Correa[2].
[1]Dpto. Ingeniería Mecánica, Energética y Materiales. Univ. de Extremadura. Spain, [2]Dpto. Química Inorgánica. Univ. de Extremadura. Spain, adiazpar@unex.es

(P2-10) MANUFACTURING OF (THICK) Ni-YSZ ANODE AND (THIN) YSZ ELECTROLYTE FOR TUBULAR SOFC BY POWDER THERMOPLASTIC EXTRUSION MOULDING.

T. Jardiel, B. Arias, G. Matula, B. Levenfeld, and A. Várez
Departamento de Ciencia e Ingeniería de Materiales. Universidad Carlos III de Madrid. Avda. de la Universidad 30, 28911, Leganés, Spain, jardiel@icv.csic.es, alvar@ing.uc3m.es

(P2-11) MULTIPLE PROFILES PROTECTIVE COATINGS FOR PIPELINES AND VESSELS.

Z. Kovziridze and I. Berdzenishvili.
Georgian Technical University, 77 st. Kostava, Tbilisi, Georgia, kowsiri@gtu.ge

(P2-12) ANODE-SUPPORTED SOLID OXIDE FUEL CELLS (SOFCs) BASED ON THIN FILMS OF DOPED CERIA ELECTROLYTES.

M. Morales[1,2], M. Segarra[2], and S. Piñol[1].
[1]Institut de Ciència de Materials de Barcelona (CSIC), Campus de la UAB, Bellaterra E-08193, Barcelona, Spain, [2]Departament de Ciencia de Materials i Enginyeria Metal.lùrgica, Facultat de Química. Universitat de Barcelona, Diagonal 647, E-08028, Barcelona, Spain., salva@icmab.es

(P2-13) SOLID OXYDE ELECTROLYTE TUBULAR CELLS FOR HYDROGEN PRODUCTION.

T. Piquero, B. Vergne, J. Vulliet, K. Wittmann-Teneze, N. Caron, and F. Blein.
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(P2-14) CORROSION RESISTANCE OF IRON POWDERS CLAD WITH PHOSPHORUS IN INORGANIC AND BIOMEDIA OF HUMAN ORGANISM.

N. Boshytska, L. Apininska, L. Protsenko, O. Budilina, and I. V. Uvarova.
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(P2-15) THERMAL BEHAVIOUR OF KAOLINITE POWDERS: MULTI-STEP DEHYDROXYLATION AND HIGH-TEMPERATURE PHASES.

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(P1-16) POWDER PROCESSING OF LAYER SILICATES BY DRY GRINDING: A BIDIMENSIONAL PARTICLE SIZE MODEL

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(P2-17) MICROSTRUCTURE DESIGN BY MECHANICAL ALLOYING.
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(P2-18) MULTIFUNCTIONAL HETERO-MODULE COMPOSITE IN B_4C-BN-TiC-SiC-C SYSTEM.
Z. Kovziridze, N. Nizharadze, G. Tabatadze, Z. Mestvirishvili, and V. Kinkladze, and E. Nikoleishvili.
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(P2-19) SHAPING AND SURFACE MODIFICATION OF METAL PARTICULATED CERAMIC-Nb POWDER COMPOSITE.
J. F. Bartolomé, C. F. Gutierrez, F. J. Palomares, and J.S. Moya.
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(P2-20) POROUS CERAMICS IN COMBUSTION APPLICATIONS.
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(P2-21) ZrO_2 FOAMS FOR HEAT RECUPERATIVES IN GAS BURNERS.
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(P2-22) INFLUENCE OF Y_2O_3 ADDITION TO Mg-PSZ CERAMICS ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES.
C. Yamagata, S. R. H. Mello-Castanho, and J. O. A. Paschoal.
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(P2-23) COMPACTION AND SINTERING PROPERTIES OF STONEWARE BASED TILES.
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(P2-24) PROCESSING AND PROPERTIES OF TUBULAR ASYMMETRIC MIXED CONDUCTING MEMBRANES
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18:45 - 20:15 h Closure and Cocktail