

SUMMER SCHOOL

CERAMIC & GLASS SCIENCE & TECHNOLOGY,
APPLICATION TO BIOCERAMICS & BIOGLASSES

General information:

Public: last year of Master studies, starting PhD, post docs, professionals
Duration : 3 days: Wednesday, Thursday, Friday, 17, 18, 19 June 2015
(It is possible to stay in the residence on Saturday and Sunday)
Location: Instituto de Cerámica y Vidrio, CSIC (lectures)
Residencia Erasmo of the Universidad Autónoma de Madrid (accommodation)

With the support of



PROGRAM

Day 1: General introduction on ceramics and glass materials, overview of properties, comparison with living hard tissues (bones) and their interaction with biomaterials

AM: from 9.00 to 12:45

9:00 Welcome to the Institute of Ceramic and Glass

Fausto Rubio, Director

9:10 General introduction 20 min
Francis Cambier (BCRC, Mons, Belgium)

9:30 1A - Ceramics: a general overview 1:20
Elisabeth Kupp (Penn State Univ., PA, USA) + 10 min q/a

11:00 Coffee break

11:15 1B - Glasses and glass ceramics: a general overview 1:20
Maria Jesus Pascual (ICyV, Madrid, Spain) + 10 min q/a

13:00 Lunch in the campus restaurant

PM: from 14:30 to 19:30

14:30 1C - Bone: structure and properties 1:20
Fernando J Monteiro (INEB, Univ. Porto, Portugal) + 10 min q/a

16:00 1D - Biological responses of cells and tissues to biomaterials 1:20
Marianna Peroglio (AO Foundation, Davos, Switzerland) + 10 min q/a

17:30 Coffee break

17:45 1E - Biocompatibility and *in vitro* tests 35 min
Maria Helena Fernandes (FMDUP, Univ. Porto, Portugal) + 10 min q/a

18:30 Round table q/a - Moderators: Francis Cambier (BCRC, Mons, Belgium) and J Chevalier (INSA Lyon, France) 1:00

21:00 Dinner on site

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Day 2: Structural ceramics for implants: applications, properties and process

AM: from 9:00 to 13:15

9:00	2A - On the history of bio-ceramics for hip joint replacement <i>Corrado Piconi, (ENEA, Italy)</i>	1:20 + 10 min q/a
10:30	Coffee break	
10:45	2B - The answer of bioceramics to long-term mechanical demands <i>J Chevalier (INSA Lyon, France)</i>	50 min + 10 min q/a
11:45	2C – Spectroscopic analyses for the characterization of bioceramics <i>V Sergo (University of Trieste, Italy)</i>	50 min + 10 min q/a
12:45	Lunch in the campus restaurant	

PM: from 14:30 to 16:00

14:30	2D - Processing: the industry point of view <i>Meinhard Kuntz (Ceramtec, Germany)</i>	1:20 + 10 min q/a
17:30	Sightseeing nearby Madrid	
21:00	Dinner in a nearside village (bus transportation)	

Day 3: Bioactive ceramics and glasses, tissue engineering, surgical procedures

AM: from 9:00 to 13:15

9:00	3A - Calcium phosphate ceramics <i>Maria Pau Ginebra (UPC, Barcelona, Spain)</i>	50 min + 10 min q/a
10:00	3B - Functional bio-glasses and glass-ceramics <i>Richard Brow (Missouri Univ., USA)</i>	50 min + 10 min q/a
11:00	Coffee break	
11:15	3C - Bio-cements <i>Eamonn de Barra (Limerick Univ., Ireland)</i>	50 min + 10 min q/a
12:15	3D - Processing of bioceramic scaffolds: state of the art and current trends - <i>Anne Leriche (Univ. Valenciennes, France)</i>	50 min + 10 min q/a
13:30	Standing lunch at the ICV	

PM: from 14:30 to 17:15

14:30	3E - Tissue engineering: concepts and applications <i>Yannis Missirlis (Univ. Patras, Greece)</i>	50 min + 10 min q/a
15:30	3F - Surgical procedures: dental and orthopedic implants <i>Jan Willem Hoekstra (Radboud university, Netherlands)</i> <i>and (1 or 2) orthopedic surgeon(s) to be confirmed (Spain)</i> <i>Moderator: Julio San Roman (ICTP, CSIC, Spain)</i>	1:20 + 10 min q/a
17:00	Concluding remarks <i>Jérôme Chevalier (INSA Lyon, France)</i>	
17:30	Refreshments	