

GRIBOI 2002

12th Interdisciplinary Research Conference on Biomaterials Final Program



Shanghai, China
March 14-17, 2002

Organized by

East China University of Science and Technology
Shanghai Second Medical University, China
Université du Littoral Cote d'Opale, France
Université de La Méditerranée, France
Université de Valenciennes, France

GROBOI 2002

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Agenda of the GRIBOI 2002 Conference

	March 13 th	Mar 14 th	Mar 15 th	Mar 16 th	Mar 17 th
8:40-9:00		Opening Ceremony (Conference Room 1)			
9:00 ~ 10:30		IL 1,2, 3 (Conference Room 1)	IL 7, 8,9 (Conference Room 1)	Session 7 (Conference Room 1) Session 8 (Conference Room 2)	
10:30 ~11:00	Pre-registration (Reception Desk of YuanLin Hotel)	Coffee Break (Lobby)	Coffee Break (Lobby)	Coffee Break (Lobby)	
11:00 ~12:35		Session 1 (Conference Room 1) Session 2 (Conference Room 2)	Session 3 (Conference Room 1) Session 4 (Conference Room 2)	Session 9 (Conference Room 1) Session 10 (Conference Room 2)	
12:35 ~14:00		Lunch (Dinner Hall)	Lunch (Dinner Hall)	Lunch (Dinner Hall)	City Tour
14:00 ~ 15:30		IL 4, 5, 6 (Conference Room 1)	IL 10, 11, 12 (Conference Room 1)	Session 11 (Conference Room 1) Session 12 (Conference Room 2)	
15:30 ~ 16:00	Registration	Coffee Break (Lobby)	Coffee Break (Lobby)	Introduction of GRIBOI 2003 in USA Close Ceremony (Multi-Function Hall)	
16:00 ~ 17:35		SS1 (Conference Room 1) SS2 (Conference Room 2) Poster Session (Conference Room 3)	Session 5 (Conference Room 1) Session 6 (Conference Room 2)		
	Welcome Reception (19:00) (Multifunction Hall)	Banquet and Tour of Huang-Pu River (17:35)	Dinner (18:00) (Dinner Hall)	Dinner (18:00) (Dinner Hall)	

Board of GRIBOI

President: J. Lemaitre(Lausanne)
Vice-president: P.Sharrock(Toulouse)
Secretary: P. Hardouin(Berck Sur Mer)
Treasurer: J. Jeanfils(Boulogne)
Vice Treasurer: J.X.Lu(Marseille, Shanghai)

Conference Chairman

Changsheng Liu(Shanghai)

Executive committee

Changshen Liu (Shanghai)
Yue Huang (Shanghai)
J.X. Lu (Marseille, Shanghai)
J. Jeanfils (Boulogne)
P. Hardouin (Berck Sur Mer)

Conference scientific committee

S. M. Belkoff(Baltimore)	H. F. Hildebrand(Lille)
D. Bernache-assolant(Limoges)	P. Kaemmerlen(Lyon)
J. J. Railhac(Toulouse)	J. T. Triffitt(Oxford)
E. Bres(Lille)	A. Laurent(Paris)
C. Chaput(Montreal)	A. P. Legrand(Paris)
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J. P. Delagoutte(Nancy)	Changsheng Liu(Shanghai)
J. Delecrin(Nantes)	D. Mainard(Nancy)
H. Deramond(Amiens)	J. P. Proust(Marseille)
J. L. Lacout (Toulouse)	

Local organizing committee

Chairmanman: Changsheng Liu	
Co-Chairmanman: Kerong Dai	
Linghong Guo	Xianghuai Liu
Yue Huang	Qisheng Gu
Qi Chen	Wei Ga
Zhilan Yin	Feng He

Endorsements

- State Ministry of Education, China
- National Natural Science Foundation of China
- Shanghai Nanotechnology Promotion Center
- Chinese Committee for Biomaterials
- Chinese Speaking Orthopaedic Society
- Asia Pacific Arthroplasty Society
- Fédération Biomateraux Nord-Pas de Calais
- Société Française de Rhumatologie
- Groupe de Recherche en Chirurgie Orthopédique
- Association pour l'Etude des Greffes et des Substituts Tissulaires de l'Appareil Locomoteur
- Shanghai Rebone Biomaterials Co. Ltd
- Shanghai Bio-Lu Biomaterials Co. Ltd
- Shanghai Qisheng Biological Preparation Industry Co. Ltd

1. Oral presentations

The oral program will include invited lecture (25min.+5min. discussion) and key lecture (15min.+5min. discussion), as well as oral presentations (10min+5min discussion). An overhead projector and slide projector will be available as standard facilities. Other facilities, such as a beam for computer projection will be available upon request. The period of oral presentation will be strictly controlled by chairman.

2. Posters

The poster format will be portrait with a max size of 90 cm (wide) by 120 cm (high). The GRIBOI 2002 will supply the 3 min. oral presentation for each poster during the poster session and coffee break.

3. Language

The conference language will be English.

4. Proceedings and Full Texts of GRIBOI 2002

The organizing committee will print the proceeding of GRIBOI 2002, and then all abstracts will be published in Journal of Biomedical Materials Research: Applied Materials post conference. The GRIBOI will be responsible for publication of the full texts in an international journal. Scientific Committee of GRIBOI will undertake culling the excellent full texts for publication.

5. Academic Session Arrangement

March 14

Open Ceremony (Conference Room 1, 8:40-9:00)

Chairman: Prof. Changsheng Liu, Prof. P. Sharrock

Open Remark

Prof. J. Lemaitre, President of GRIBOI

Powder Technology Laboratory, EPFL-LTP, MX-Ecublens, CH-1015 Lausanne, Switzerland

Congratulation Remark (1)

Prof. Xingyu Wang, President of East China University of Science and Technology.

East China University of Science and Technology, Shanghai, China

Congratulation Remark (2)

Dr. Y. Gousty, Scientific and Education Officer.

Consulate General de France in Shanghai.

Congratulation Remark (3)

Prof. Tingfe Xi, Chairman of Chinese Society of Biomedical Engineering.

National Institute for the Control of Pharmaceutical and Biological Products, Beijing, China

Congratulation Remark (4)

Prof. Xingdong Zhang, Vice-Chairman and Secretary General, Chinese Committee for Biomaterials

Sichuan University, Chengdu, China

March 14

Invited Lectures-1 (Conference Room 1, 9:00-10:30)

Chairman: Acad. Zhongwei Chen, Prof. P. Sharrock

9:00-9:30

Working Characteristics of Injectable Calcium Phosphate Hydraulic Cement

Prof. J. Lemaitre

Powder Technology Laboratory, EPFL-LTP, MX-Ecublens, CH-1015 Lausanne, Switzerland

9:30-10:00

Future Direction of Calcium Phosphate Cements

Prof. Changsheng Liu

Institute of Biomaterials, East China University of Sci. and Tech., China

10:00-10:30

Drug Delivery and DDS Scaffold

Prof. Zhongwei Gu

Institute of Birth Control and Family Plan, Beijing, China

10:30-11:00 **Coffee Break (Lobby)**

Session 1 Characterization of Biomaterials (Conference Room 1, 11:00-12:35)

Chairman: Prof. Yilin Cao, Prof. J. Lemaitre

11:00-11:20 **Key Lecture:**

NMR Spectroscopy Contribution to the Study of Biomaterial Mineralisation

Legrand, A.P

Laboratoire de Physique Quantique. FRE CNRS 2312. ESPCI. 10, Rue Vauquelin 75005
Paris, France

11:20-11:35

Biocompatibility of Dental Alloys: Establishment of a Cytotoxicity Index

J.-C. Hornez, A. Lefevre , H. F. Hilderabd

Biomaterials Research Laboratory, Faculté de Médecine, F-59045 Lille Cedex, France

11:35-11:50

Isolation and Two-Dimensional Electrophoresis Analysis of Plasma Membrane Proteins From
Osteoblastic Cells

Rouahi M, Grard T, Tavernier E, Anselm K, Noel B, Hardouin P, Jeanfils J

Instistitut de Recherche sur les Biomateriaux et les Biotechnologies (IR2B)- ULCO Basin
Napoleon, Quai Robert Masset, BP 120 62327 Boulogne sur mer, France

11:50-12:05

Physico-Chemical Analysis of Dental Root Canal Filling Biomaterials

Aline Sinan, Olivier Moyer, Patrick Sharrock, Paul Cala

Faculté d' Odontologie, Université Paul Sabatier, Toulouse, France

12:05-12:20

Interbody Arthrodesis Using a Plasmapore Titanium Block. Mechanical and Histological
Experimental Study in Sheep

Tropiano P, Bronsard J.J., Poitout D.G.

Centre Hospitalo-Universitaire, Service D'orthopedie, Traumatologie, Chemin des Bourrelys,
Marseille, France

12:20-12:35

Rheological Characteristics of Chitin/PCL Blends with BC Additives

Kang Sun, Anle Yang and Renjie Wu

Shanghai Jiao Tong University, Huashan Road, Shanghai 200030, China

Session 2 Bone Cement (Conference Room 2, 11:00-12:35)

Chairman: Prof. Changsheng Liu, Prof. P. Hardouin

11:00-11:20 **Key Lecture:**

Improvement of the Resorbability and Release of Active Principles in Injectable Phosphocalcium
Cement; Research and Development

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J. L. Lacott

CIRIMAT Physicochimie des Phosphates ENSIACET / INP Toulouse UMR CNRS 5085 118,
Route de Narbonne 31077 Toulouse Cedex, France

11:20-11:35

Bone-Cements Based on Tricalcium Silicate

Chine-Wen Huang, Ren-Jei Chung, Pu-Chi Lin, Tuan-Jung Hsu and Tsung-Shune Chin
Department of Materials Science and Engineering, National Tsing Hua University, 101,
Sec-2, Kunag-Fu Road, Hsinchu 30043, Taiwan, China

11:35-11:50

Long-term Aging of Brushite Cements in Physiological Conditions: An in Vitro Study

S. Rousseau, J. Lemaitre, M. Bohner & C. Frei

Powder Technology Laboratory, EPFL-LTP, MX-Ecublens, CH-1015 Lausanne, Switzerland

11:50-12:05

In Vivo Evaluation of Recombinant Human Bone Morphogenetic Protein 2 (rhBMP-2) Delivered
in an Injectable Calcium Phosphate-based Matrix for Fracture Repair

Rebecca Li, Howard Seeherman, Darren D'Augusta, Cara Blake, Mary Bouxsein, Jian Li,
John Wozney

Genetics Institute/Wyeth-Ayerst Research, 200 Cambridge Park Drive, Cambridge, MA, USA

12:05-12:20

A Hardening Paste Containing Calcium Phosphates

P. Sharrock, Marina Fiallo

Chemistry Department, Paul Sabatier Institute of Technology, Castres, France

12:20-12:35

The Mechanism of Hydration Reaction in Magnesium Phosphate Bone Cement

Wei Gai, Changsheng Liu

Institute of Biomaterial, East China University of Science and Technology, Shanghai 200237,
China

12:35-14:00 **Lunch (Dinner Hall)**

Invited Lectures-2 (Conference Room 1, 14:00-15:30)

Chairman: K. de Groot, Prof. H.F. Hildebrand

14:00-14:30

The Articular Cartilage Replacement. New Perspectives in Tissular Engineering

Prof. D. Hartmann

Unité Biomatériaux et Remodelages Matriciels - EA 3090, Université Claude Bernard,
69373 Lyon Cedex, France

14:30-15:00

Advances of Tissue Engineering in China

Prof. Yilin Cao

Department of Plastic and Reconstructive Surgery, Shanghai Ninth Hospital, Tissue Engineering Research Center, Shanghai Second Medical University, Shanghai, China

15:00-15:30

The Osteoinductivity of Ca-P Biomaterials and the Potential in Clinic

Prof. Xingdong Zhang

Engineering Research Engineering Center for Biomaterials, Sichuan University, China

15:30-16:00 **Coffee Break (Lobby)**

Young Scientist and Ph D. Student Session: 1 (Conference Room 1, 16:00-17:35)

Chairman: Prof. Ling Qin, Prof. J. Jeanfiles

16:00-16:15

Clinicotherapeutical Experience with Collagen Sponge as Hemostat and Wound Dressing Material

JiminWu, Huilei Shi, Yongfu Zhao, Song Zhao, Xizheng Zhang, Ruixin Li

Institute of Medical Equipment, Tianjin 300161, China

16:15-16:30

Cardiac Muscle Tissue Engineering with Cardiac Myocytes Seeded on PGA Polymer

Changyong Wang, Huihua Chen, Ximin Guo, Cuimi Duan, Qiang Zhao, Yonghong Wang

Institute of Basic Medical Sciences of Beijing, 27, Taiping Road, Beijing 100850, China

16:30-16:45

The Identification and Large Culture of Human Bone Marrow Stromal Cells

Demin Wen, Wensong Tan

East China University Of Science and Technology, Box 309, No. 130, Meilong Rd., Shanghai, China

16:45-17:00

Preparation of Bioactive Oxide Films on the Surface of Titanium Alloys

X. Y. Cui, T. Y. Xiong, W. Q. Zhang, J. Wu, H. Z. Jin, Z. X. Guo

Institute of Metal Research, Chinese Academy of Science, Wenhua Road 72#, Shenyang, China

17:00-17:15

Optimization of ST-cell Microcarrier Culture Process

Jianchao Wang, Yan Zhou, Wensong Tan

East China University of Science and Technology, Box 309, No. 130 Meilong Rd., Shanghai, China

17:15-17:30

The Physiological Action and the Clinical Use of Hyaluronic Acid in Articulation

Kai Yan, Qisheng Gu

Qisheng Institute of Biomaterials and Technology, Shanghai, China

Young Scientist and Ph D. Student Session: 2 (Conference Room 2, 16:00-17:35)

Chairman: Prof. Jiang Chang, Prof. Guangfu Yin,

16:00-16:15

Surface Modification of Titanium Implant by Microarc Oxidation and Hydrothermal Treatment

Ping Huang, Kewei Xu, Yong Han

State-Key Laboratory of Mechanical Behavior of Materials, Xi'an Jiaotong University,
Xi'an710049, China

16:15-16:30

Cross-linked Tapioca Starch with POCl₃ for Use as Biomedical Materials: Its Enzymatic
Digestibility and Enzyme Resistant Starch Content

Xiaoxi Li, Ling Chen, Lin Li, Qibiao Wen, Jiandong Ye

College of Materials, South China University of Technology, Guangzhou, China

16:30-16:45

Apatite Formation on the Surface of Wollastonite/tricalcium Phosphate Composites
Immersed in Simulated Body Fluid

Xiang Huang, Dongliang Jiang, Shouhong Tan

Shanghai Institute of Ceramics, Shanghai 200050, China

16:45-17:00

Experimental Study for Repair of Cranial Defects with Bone Marrow Stem Cells and
 β -TCP

Bin Bo, Changyong Wang, Ximin Guo, Cuimi Duan, Qiang Zhao, Yonghong Wang,
Huihua Chen, Fan Ming, Zeqiang Fang, Jianxi Lu

Institute of Basic Medical Sciences of Beijing, 27, Taiping Road, Beijing 100850, China

17:00-17:15

Fabrication of Calcium Phosphate Ceramics with Controlled Composition and Porosity

Shu Cai, Kangde Yao, Jijin Yu, Xuefeng Song

Department of Material Science and Engineering, Tianjin University, Tianjin, China

17:15-17:30

Culture Materials Affect ex vivo Expansion of Hematopoietic Cells

Zhanyou Chi, Demin Wen, Wensong Tan and Gance Dai

East China University Of Science and Technology, Box 309, No. 130, Meilong Rd., Shanghai,
China

March 15

Invited Lectures-3 (Conference Room 1, 9:00-10:30)

Chairman: Prof. P. Hardouin, Prof. T.Kokubo

9:00-9:30

Collagen-Based Scaffold Materials for Bone Tissue Engineering

Prof. F Z. Cui

Department of Material Science and Engineering, Tsinghua University, Beijing, China

9:30-10:00

Biomimetic Coatings that Can be Bone Inductive

Prof. Klaas de Groot

IsoTis NV, P.O.Box 98, 3720 AB Bilthoven, The Netherlands

10:00-10:30

Bioactive Composites for Tissue Repair

Prof. M.Wang

School of Mechanical and Production Engineering, Nanyang Technological University

50 Nanyang Avenue, Singapore 639798

10:30-11:00

Coffee Break (Lobby)

Session 3 Nano-Biomaterials (Conference Room 1, 11:00-12:35)

Chairman: Prof F. Z. Cui, Prof A.H. Ucisik

11:00-11:20 **Key Lecture:**

Nano-Hydroxyapatite/Collagen Composite

Qinling Feng

Department of Material Science and Engineering, Tsinghua University, Beijing 100084
China

11:20-11:35

Synthesis and Characterization of Nano-sized Hydroxyapatite Powder by Sol-gel Method

Yunjing Song, Musen Li, Shulin Wen

College Of Materials Science and Engineering, Shandong University, Jinan, China

11:35-11:50

Synthesis of Nano-HAP by Sol-gel Method

YuanYuan, Changsheng Liu

Institute of Biomaterials, East China University of Science and Technology, Shanghai, China

11:50-12:05

Wet Synthesis and Reactive Parameters of Nano-hydroxyapatite Particles

Guo Dagang, Kewei Xu

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State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University,
Xi'an 710049, China

12:05-12:20

The Bioactivity of Sol-gel Bioglass in Vitro

Fangping Chen, Xiaofeng Chen, Yingjun Wang

Material Colleges, South China University of Technology, Guangzhou 510640, China.

12:20-12:35

Super-Fine Particles Formation in Plasma Sprayed Hydroxyapatite Coating

Yupeng Lu, Shitong Li, Ruifu Zhu, Musen Li, Jianhua Wang, Tingquan Lei

College Of Materials Science and Engineering, Shandong University, Jinan, China

Session 4 Stem Cell and Cell Culture (Conference Room 2, 11:00-12:35)

Chairman: Prof. D. Hartmann, Prof. Qiqing Zhang

11:00-11:20 **Key Lecture:**

A Briefly Introduction about Stem Cell Engineering

Yun Zhao

Stem Cell Research Center, Peking University, Beijing, China

11:20-11:35

Growth and Differentiation of Human Bone Marrow Stromal Cells on Chitosan
Derived Materials

Ming Yang, Shanshan Zhu, Yue Chen, Zhijie Chang, Yandao Gong, Nanming Zhao

Department of Biological Science and Biotechnology, Tsinghua University, Beijing, China

11:35-11:50

Surface Analyses and Biological Behavior of Micro-arc Oxidized and Hydrothermally
Treated Titanium

Y.M. Zhang, P. Bataillon-Linez, P. Huang, Y.M. Zhao, Y. Han, M. Traosnel. K.W. Xu,
H.F. Hildebrand

School of Stomatology, Fourth Military Medical University, Xi'an, China

11:50-12:05

Optimization of Culture Conditions of Human Mesenchymal Cells for Bone Tissue Engineering

Anselme K., Noel B., Broux O., Bouxin B. Duderme A.F., Blanchi F., Jeanfiles J.,
Hardouin P

I.R.2.B., Université du Littoral Cote d'Opale, Berck sur mer, Boulogne/mer, France

12:05-12:20

Adhesion, Proliferation and Migration Behaviour of Bovine Pigmented Retinal Epithelial
Cells Cultured with Sulphated Polysaccharides

F. Malbrel, V. Hinard, A. Lefevre, C. Boisson-Vidal, P. Labalette, J. Jozefonvicz, H.F.
Hildebrand

Biomaterials Research Laboratory, Faculté de Médecine, F-59045 Lille cedex, France.

12:20-12:35

Low Molecular Weight Hyaluronans Induce Bone Colony Formation in Rat Mesenchymal Cell Cultures

Yuen-Y Cheng, Lin Huang, P. L. Koo, J.C.Y. Cheng, L. Qin, Shekhar Kumta

Department of Orthopaedics and Traumatology, Chinese University of Hong Kong, Hong Kong, China

12:35-14:00 Lunch (Dinner Hall)

Invited Lectures-4 (Conference Room 1, 14:00-15:30)

Chairman: Prof. J. Lemaitre, Prof. Xingdong Zhang

14:00-14:30

Bioactive Metals: Preparation and Properties

Prof. T. Kokubo

Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Japan

14:30-15:00

Biotechnologies in Studying Bone-Biomaterial Interface in Experimental Spinal - a Review

Prof. JCY Cheng

Department of Orthopaedics & Traumatology, Chinese University of Hong Kong, Hong Kong, China

15:00-15:30

Bone Ingrowth of Bone Substitutes

Kerong Dai

Department of Orthopaedics, Shanghai Ninth People's Hospital, Shanghai Second Medical University, Shanghai, China

15:30-16:00 Coffee Break (Lobby)

Session 5 Surface Modification of Biomaterials (Conference Room 1, 16:00-17:35)

Chairman: T. Kokubo, Prof. Kewei Xu

16:00-16:20 **Key Lecture:**

Surface Treatment of Biomaterials and Its Applications

Xianghuai Liu

Shanghai Institute of Micro System and Information Technology, Chinese Academy of Sciences, Shanghai, China

16:20-16:35

Electrochemical, Physicochemical and Biological Surface Characterization of Gold

Based Alloys

M. Traisnel, Ph. Rocher, Ch. Pelegris, H. F. Hildebrand

ENSCL, BP 108, 59652 Villeneuve d'Ascq, France

16:35-16:50

Structural Design of DLC/Titanic Alloy Gradient Biomaterials Used for Artificial Mechanical Heart Valves

Guangfu Yin, Dali Zhou, Changqiong Zheng, Aijun He

College of Material Science and Engineering, Sichuan University, Chengdu 610065, China

16:50-17:05

Improvement of Endothelial Cell Adhesion onto Silk Fibroin Surface SO₂ Plasma Treatment and Free Radical Involvement

Xinlin Yang, Liyong Wang, Jinwei Gu, Hesun Zhu

Research Center of Materials Science, Beijing Institute of Technology, P.O. Box 327, Beijing 100081, China

17:05-17:20

Surface Modification of Blood Contacting Biomaterials by Titanium Oxide Coatings

N. Huang, P. Yang, YX Leng, JY Chen, J. Wang, H Sun, G.J. Wan, TF Xi, Y. Leng and PK Chu

Institute of Surface Engineering of Biomaterials, College of Materials Science and Engineering, Southwest Jiaotong University, Chengdu, China

17:20-17:35

Plasma-based Low-energy Ion Implantation for Surface Engineering of Biomedical Metallic Materials

X. M. Zhu, **M. K. Lei**

Surface Engineering Laboratory, Department of Materials Engineering, Dalian University of Technology, Dalian 116024, China

Session 6 In vitro and vivo Evaluation of Biomaterials (Conference Room 2, 16:00-17:35)

Chairman: Prof. JCY. Cheng, Prof. P. Hardouin

16:00-16:20 **Key Lecture:**

Engineered Allologous Chondrocyte Pellet For Reconstruction of Fibrocartilage Zone at Bone Tendon Junction

L Qin, WN Wong, KO Tai, KM Lee, KS Leung

Department of Orthopaedics & Traumatology, Chinese University of Hong Kong, Shatin, N.T., Hong Kong, China

16:20-16:35

Study on the Microcapsulated Immortalized Mandibular Condylar Chondrocyte

Xiaohong Duan, Dagang Guo, Kewei Xu, Junzheng Wu

School of Material Engineering, Xi'an Jiaotong University, Xi'an, China

16:35-16:50

Effect of Dexamethasone on the Differentiation of Rabbit Bone Marrow Stromal Stem Cell

Cornet F, Broux O, Anselme K, Hardouin P, Jeanfils J

Institut de Recherche sur les Biomateriaux et les Biotechnologies (IR2B)- ULCO Basin
Napoleon, Quai Robert Masset, BP 120 62327 Boulogne sur mer, France

16:50-17:05

A Study on the Deformability of Human Femoral Head Cartilage

S. Zeytin, B.A. Konduk, C. Bindal, A.H. Ucisik

Bogazici University, Institute of Biomedical Engineering, 80815 Bebek-Istanbul, Turkey

17:05-17:20

Catheterization of the Long Bones: Development of a New Device for Intraosseous Biomaterials
Injection

Railhac J.J.

Hôpital Universitaire Purpan, 31059 Toulouse Cedex, France

17:20-17:35

Sol-gel Preparation and in vitro Test of Fluorapatite/Hydroxyapatite Films

Kui Cheng, Haibo Qu, Wenjian Weng, Gaorong Han, Piyi Du, Ge Shen, J. M. F. Ferreira

Department of Material Science and Engineering, Zhejiang University, Hangzhou 310027,
China

March 16

Session 7 Biodegradable Composites (Conference Room 1, 9:00-10:35)

Chairman: Prof. C. Baquey, Prof. Shengguo Wang

9:00-9:20 **Key Lecture:**

The Effect of Dialysis Environment on the Behavior of Polymeric Hollow Fibers

A.H. Ucisik, B.A. Konduk

Bogazici University, Institute of Biomedical Engineering, Dept. of Materials, Prostheses and
Artificial Organs 80815 Bebek-Istanbul, Turkey

9:20-9:35

Preparation and Characterization of the Silicone Rubber-hydroxyapatite Composites

Shansong Mou, Mei Tu, Lihua Li, Changren Zhou, Shunqing Tang

Institute of Biomedical Engineering, Jinan University, Guangzhou 510632, China

9:35-9:50

Production and Evaluation of Bioactive and Biodegradable Composites for Tissue
Regeneration

M.Wang, J.Ni, L.J.Chen

School of Mechanical and Production Engineering, Nanyang Technological University

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50 Nanyang Avenue, Singapore 63979

9:50-10:05

Preparation and Application of the PLA/Chitosan Composite Materials

Changren Zhou, Lihua Li, Shan Ding

Department of Chemistry, Jinan University, Guangzhou, China

10:05-10:20

Collagen - Processing and Properties as Biomaterial

Hartmut F. H., Ph. Rocher, F. Monchau

Elisabeth Delcourt-debruyne Laboratoire de Recherche sur les Biomateriaux, UPRES

EA 1049, Faculté de Médecine, 59045 Lille cedex, France

10:20-10:35

Reinforced Collagen Sponge as Artificial Skin Scaffold

Shunqing Tang, Shansong Mou, Xuan Mao, Changren Zhou

Biomedical Institute Engineering of Jinan University, Guangzhou 510632, China

Session 8 Bioceramics (I) (Conference Room 2, 9:00-10:35)

Chairman: Prof. P. Sharrock, Prof. Xinling Yang

9:00-9:20 **Key Lecture:**

Precipitation Phase on the HA/TCP in Simulated Body Fluid

Yang Leng, JY. Chen, Shuxin Qu

Department of Mechanical Engineering, Hong Kong University of Science & Technology,
Hong Kong, China

9:20-9:35

Study on the Constitutive and Structure of the Interface Between β -TCP Bioceramic and Bone after Implantation

Yuhua Yan, Xiaoxi Li, Xuhui Lu, Shipu Li

Biomedical Materials Engineering and Research Center, Wuhan University of Technology,
Wuhan 430070, China

9:35-9:50

Behavior of Platelets Adhered on Ti-O Film

P. Yang, N. Huang, Y. X. Leng, J. Y. Chen, H. Sun, J. Wang, G. J. Wan, T.F. Xi, Y. Leng,
P. K. Chu

Department of Materials Engineering, Southwest Jiaotong Univ., Chengdu 610031, China

9:50-10:05

Effect of Size and Shape as Osteoconductive Materials

B. Flautre, S. Vavasseur, M.C. Blary, M. Descamp, JX Lu, & P. Hardouin

IR2B-Berck/Mer -62600, France

10:05-10:20

Fabrication of Hydroxyapatite Ceramics with Controlled Porosity

Xiumin Yao, Shouhong Tan, Dongliang Jiang

Shanghai Institute of Ceramics, Chinese Academy of Science, Shanghai 200050, China

10:20-10:35

TCP Reinforced Materials for Scaffold Fabrication

Xiumei Mo

National University of Singapore, Singapore

10:35-11:00 Coffee Break (Lobby)

Session 9 Tissue Engineering (Conference Room 1, 11:00-12:35)

Chairman: Prof. Xinling Yang, Prof. P. Hardouin

11:00-11:20 **Key Lecture:**

A New Type Injectable Cells Scaffold

Shenguo Wang, Guanming Li, Jian Yang, Jianzhong Bei

Center for Molecular Sciences, Institute of Chemistry, Chinese Academy of Sciences,
Beijing 100080, China

11:20-11:35

Enhanced Osteogenesis of Cancellous Bone Allograft Loaded with Human Marrow
Mesenchymal Cells

Tingting Tang, Hua Lu, Kerong Dai

Department of Orthopaedics, Shanghai Ninth People's Hospital, Shanghai Second Medical
University Department of Orthopaedics, Xinhua Hospital, Shanghai Secondary Medical
University, Shanghai, China

11:35-11:50

Study on the Bioactive Degradable Bone Tissue Engineering Scaffold Materials

Naru Zhao, Jiandong Ye, Yingjun Wang, Kaihui Nan, Guohua Liu

College of Materials Science and Engineering, South China University of Technology,
Guangzhou, China

11:50-12:05

Bone Tissue Engineering: Genetic Aspects

J. Jeanfiles

IR2B, 62327 Boulogne sur mer, France

12:05-12:20

The Construction of Collagen-Cs Scaffold in Artificial Dermis

Qiqing Zhang, Lihai Zhang, Lingrong Liu, Dongrui Ma

Institute of Biomedical Engineering, Chinese Academy of Medical Sciences & Peking
Union Medical College, P. O. Box 25 (204), Tianjin 300192, China

12:20-12:35

Bone Tissue Engineering Using Cells from Goat Adipose Tissue

Jiang Chang, Kaili Lin

Biomaterials and Tissue Engineering Research Center, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai, China

Session 10 Clinical Application and Evaluation of Biomaterials

(Conference Room 2, 11:00-12:35)

Chairman: Prof JCY Cheng, Prof. D. Poitout

11:00-11:20 **Key Lecture:**

Vertebroplasty and Kyphoplasty in Osteoporosis

P. Hardouin

IR2B Université du Littoral Cote d'Opale, 62600, Berck/mer, Boulogne/mer, France

11:20-11:35

Segmental Prosthesis for Bone/Joint Replacement after Tumor Resection Using Tissue/Organ Engineering Principles

Edmund Y. S. Chao

Johns Hopkins University, Baltimore, Maryland, USA

11:35-11:50

An Investigation of Biological and Mechanical Properties of TCP Impregnated PMMA Cement

Kerong Dai, Shangxi Fu, Tingting Tang,

Department of Orthopaedics, Shanghai Ninth People's Hospital, Shanghai Second Medical University, Shanghai, China

1:50-12:05

Failure Modes of a Low Profile Porcine Valve Analysis of 62 Example Bioprosthesis

R. G. Guidoin, G. Marinov, A.P. Legrand, Y. Marois

Laval University, Quebec City, Canada

12:05-12:20

The Stress Analysis in Gait and the Structural Optimization of Femur

Qingcai Su, Musen Li, Xihua Liu, Dongke Liang

Biomaterials Research Laboratory, College of Materials Science and Engineering, Shandong University, Jinan 250061, China

12:20-12:35

Osteochondral Allografts or Massive Prosthesis Surrounding by Allograft in Bone Tumor Surgery

D.G. Poitout, P. Tropiano, C.H.U. Nord

Chemin des Bourrely, 13915 Marsellon Cedex 20, France

12:35-14:00 Lunch (Dinner Hall)

Session 11 Coating (Conference Room 1, 14:00-15:35)

Chairman: Prof. A.P. Legrand, Prof. Ling Qin

14:00-14:20 **Key Lecture:**

Changes of Phases and Microstructure in Plasma Sprayed HA Coatings

JY Chen

Engineering Research Center in Biomaterials, Sichuan University, Chengdu, China

14:20-14:35

Investigation of Bioactive Glass Coatings and the Clinic Application of Artificial Dental Implants

Weiming Gu, Jitang Huang, Qing Jie, Ruoding Wang

Shanghai Institute of Ceramics, Chinese Academy of Science, Shanghai, China

14:35-14:50

Fabrication and Characterization of Hydroxyapatite-Ti Functionally Graded Biomaterial as Hard Tissue Replacement

Jingchuan Zhu, Chenglin Chu, Zhongda Yin

School of Materials Science and Engineering, Harbin Institute of Technology, Harbin 150001, China

15:50-15:05

The New Technology of Preparing BG/HA Graded Coating on Titanium Alloy by Electrophoresis Codeposition

Xiaoming Chen, Chuanbo Xu, Jianhua Li, Yuheng Jiao

Biomedical Materials Engineering and Research Center, Wuhan University of Technology, Wuhan 430070, China

15:05-15:20

Influence of Proteins on Formation of the Surface Reactive Layer on the HA/TCP Ceramics

Linghong Guo, Mei Huang, Xingdong Zhang, J. E. Davies

Engineering Research Center in Biomaterials, Sichuan University, Chengdu, China

15:20-15:35

The Microstructure of HA Bioceramic Coating Synthesized by Laser Induced Deposition

Diangang Wang, Chuanzhong Chen, Shushan Yao, Quanhe Bao

Institute of Materials Science and Technology, Shandong University, Jinan 250061 China

Session 12 Bioceramics (Conference Room 2, 14:00-15:35)

Chairman: Prof. Qinling Feng, Prof. J.L. Lacout

14:00-14:20 **Key Lecture:**

Use of Porous Bioceramics as Tissue Engineering Support

JX Lu

