

Poster Program

Poster Session

Sunday 11 May 2014

17:00-19:00

[P.01]	Evaluation of aerosol electrospray analysis of metal-on-metal wear particles from total joint replacement E. Benca ^{*1} , G. v.Skrbensky ¹ , K. Mühlbacher ² , G. Reinisch ³ , A. Kolb ¹ , G. Reischl ² , R. Windhager ¹ , ¹ Medical University of Vienna, Austria, ² University of Vienna, Austria, ³ Biomechanische Forschungs-Gesellschaft m.b.H., Austria
[P.02]	Roughness, friction and tactile perception of normal and chapped skin with and without skin cream treatment S. Chen*, W. Tang, S. Ge, <i>China University of Mining and Technology, China</i>
[P.03]	Solving problems of wear and ossification in intervertebral cervical disc implants by thin films J.M. Lackner ^{*1} , W. Waldhauser ¹ , M. Kot ² , ¹ Joanneum Research Forschungsges.m.b.H., Austria, ² AGH University of Science and Technology, Poland
[P.04]	A finite elements analysis of tibial post loads in postero-stabilized total knee arthroplasty G. Stan ^{*1} , H. Orban ¹ , L. Gruionu ² , ¹ University of Medicine Carol Davila, Romania, ² University of Craiova, Romania
[P.05]	Influence of centrifugation treatment on the lubricating properties of human whole saliva Y.F. Zhang, J. Zheng*, L. Zheng, L.C. Hua, Z.R. Zhou, <i>Southwest Jiaotong University, China</i>
[P.06]	The optimum BSA concentration on the surface of stainless steel tribological pair J.L. Zhou ^{*1} , S.Q. Wu ^{1,2} , P.L. Wong ^{1,3} , G.Q. Wu ¹ , H.Z. Cheng ¹ , Z.M. Cheng ¹ , S.Y. Yang ¹ , ¹ Nantong University, China, ² Technical University of Darmstadt, Germany, ³ City University of Hong Kong, China
[P.07]	Tribological properties of Zr₆₁Ti₂Cu₂₅Al₁₂ bulk metallic glass under simulated physiological conditions Y. Wang, L.L. Shi, D.L. Duan, S. Li, J. Xu*, <i>Institute of Metal Research, China</i>
[P.08]	Thermal oxidation of Ti6Al4V alloy and its biotribological properties under serum lubrication Y. Luo*, M. Tian, Q. Wang, S. Ge, <i>China University of Mining and Technology, China</i>
[P.09]	Torsional fretting behaviors of biologic porous titanium H.X. Quan ^{1,2} , L.W. Zheng ^{*1} , H.Y. Yu ¹ , M.H. Zhu ³ , ¹ Sichuan University, China, ² First Affiliated Hospital of Dalian Medical University, China, ³ Southwest Jiaotong University, China
[P.10]	Characterization of wear surfaces on metal on polyethylene hip explants using electron microscopy V. Vuong ^{*1} , M. Pettersson ² , C. Persson ² , S. Larsson ³ , H. Engqvist ² , K. Grandfield ¹ , ¹ McMaster University, Canada, ² Uppsala University, Sweden, ³ Uppsala University Hospital, Sweden
[P.11]	Discussions on the wear test reliability of artificial hip joints: A study on the UHMWPE cups against CoCrMo heads wear simulation S. Ge*, G. Wu, <i>China University of Mining and Technology, China</i>
[P.12]	Traction coefficient reduction of a steel ball on a textured UHMWPE surface lubricated with fetal bovine serum, under sliding-rolling conditions I. Dominguez-Lopez, J.D.O. Barceinas-Sanchez, M. Alvarez-Vera*, A.L. Garcia-Garcia, <i>IPN-CICATA Queretaro, Mexico</i>
[P.13]	Tribological behavior of biomaterials for heads of hip joints by modification of surface topography N. Crisan*, V. Fridrici, P. Kapsa, <i>Universite de Lyon, France</i>
[P.14]	Extremely low wear rates in hip joint bearings coated with nanocrystalline diamond M. Amaral ¹ , M.M. Maru ² , S.P. Rodrigues ¹ , R.M. Trommer ² , F.J. Oliveira ¹ , C.A. Achete ² , R.F. Silva ^{*1} , ¹ University of Aveiro, Portugal, ² INMETRO, Brazil
[P.15]	A novel model of osteoarthritis-like chondrocyte preparation through compressive stress Y-C. Yang ^{*1} , C-H. Hsu ² , W-T. Kuo ¹ , Y-J. Sun ¹ , F-H. Lin ¹ , ¹ National Taiwan University, Taiwan, ² National Health Research Institute, Taiwan
[P.16]	Biotribological behavior of the Ti/TiB₂ nanostructured multilayers on the surface of titanium alloys G.H. Zhou*, Y. Zhang, Y.F. Zhu, C.Z. Chen, H.Y. Ding, <i>Huaiyin Institute of Technology, China</i>
[P.17]	Development of tribological Cr/CrN+DLC(dopped Cr) nano- multilayer coatings for medical tools application L. Major ^{*1} , M. Kot ² , M. Janusz ¹ , J.M. Lackner ³ , J. Morgiel ¹ , ¹ Institute of Metallurgy and Materials Science, Poland, ² University of Science and Technology, Poland, ³ JOANNEUM RESEARCH- Materials- Institute for Surface Technologies and Photonics, Austria
[P.18]	Research on rolling friction lubrication mechanisms and the interstitial fluid load support characteristics of PVA-HA composite hydrogel D.K. Zhang*, K. Chen, Y. Luo, <i>China University of Mining and Technology, China</i>
[P.19]	In-vitro behaviour of RF-sputtered HA film onto titanium surface with nano-pores H.C. Lai ¹ , Y.J. Chuang ² , P.R. Chen ² , Y.C. Yang ¹ , W.H. Kuan ¹ , K.Y. Hung ^{*1} , H.P. Feng ¹ , ¹ Ming Chi University of Technology, Taiwan, ² Ming Chuan University, Taiwan, ³ National Taipei University of Technology, Taiwan

[P.20]	Effect of saliva composition on the biomechanical properties of model food boluses obtained through mimicking tongue-palate compression of dairy gels M. Panouillé, V. Mathieu*, A. Saint-Eve, I. Délérís, I. Souchon, <i>INRA - AgroParisTech, France</i>
[P.21]	Tribological behavior of alumina sintered in different atmospheres for biomedical application G. de Portu*, C. Melandri, P. Pinasco, C. Capiani, <i>National Research Council of Italy (CNR), Italy</i>
[P.22]	Lubrication of artificial hip joints: Fluorescent imaging of protein flow in a sliding contact M. Parkes, C.W. Myant*, P.M. Cann, <i>Imperial College London, UK</i>
[P.23]	Quantitative evaluation of adsorbed protein film affecting tribological property of joint prosthesis materials K. Nakashima*, Y. Sawae, S. Kudo, T. Murakami, <i>Kyushu University, Japan</i>
[P.24]	The relation between the tribological test results and tactile response Y.Z. Lee*, M.S. Kim, <i>Sungkyunkwan University, Republic of Korea</i>
[P.25]	Properties of Sodium Bicarbonate abrasives in toothpastes S. Sarembe, A. Cismak, M. Morawietz, N. Teuscher, A. Kiesow*, <i>Fraunhofer Institute for Mechanics of Materials IWM, Germany</i>
[P.26]	Design and development of wear screening device for prosthetic hip joint materials using retrieval studies A.C. Kulkarni ¹ , A.N. Dube* ² , D.M. Kulkarni ¹ , A. Ganguli ³ , J.A. Pachore ⁴ , ¹ BITS-PILANI.K.K.Birla Goa Campus, India, ² Ducom Instruments, USA, ³ Ducom Instruments Pvt., Ltd, India, ⁴ Shelby hospital, India
[P.27]	Interaction of mucins with albumin and chitosan and its influence on the lubricating properties N. Nikogeorgos*, S. Lee, J.B. Madsen, <i>Technical University of Denmark, Denmark</i>
[P.28]	The effects of friction on the etiology of superficial pressure ulcers M. Klaassen* ¹ , M.A. Masen ^{1,2} , ¹ University of Twente, The Netherlands, ² Imperial College London, UK
[P.29]	Biotribological behaviour and cytotoxicity evaluation of laser and mechanically marked biomaterial E.F. Pieretti ¹ , F.J.C. Baratela ¹ , O.Z. Higa ¹ , J.T.S.L. Wilcken ^{1,2} , R.C. Cozza ¹ , T.P. Leivas ^{1,3} , M.D.M. Neves* ¹ , ¹ Instituto de Pesquisas Energéticas e Nucleares, Brazil, ² Centro Universitário da FEI, Brazil, ³ Instituto de Ortopedia e Traumatologia do Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil
[P.30]	Dental tribology evaluation of ferritic stainless steels for magnetic implants E.F. Pieretti ¹ , R.A. Marques ¹ , J.T.S.L. Wilcken ^{1,2} , R.C. Cozza ^{1,2} , M.D.M. Neves* ¹ , ¹ Instituto de Pesquisas Energéticas e Nucleares, Brazil, ² Centro Universitário da FEI, Brazil
[P.31]	Wear of femtosecond laser treated ASTM F 138 stainless steels for orthopaedic applications E.F. Pieretti ¹ , R.C. Cozza ^{1,2} , T.P. Leivas ^{1,3} , W. Rossi ¹ , M.D.M. Neves* ¹ , ¹ Instituto de Pesquisas Energéticas e Nucleares, Brazil, ² Centro Universitário da FEI, Brazil, ³ Instituto de Ortopedia e Traumatologia do Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil
[P.32]	Comparison of gravitational and optical (redlux) wear measurements on mom heads from a hip wear simulator trial L.R. Alberts* ¹ , V. Martinez-Nogues ¹ , R.B. Cook ¹ , C. Maul ² , M. Stolz ¹ , R.J. Wood ¹ , ¹ University of Southampton, UK, ² RedLux Ltd, UK
[P.33]	Effects of lubricant protein mass concentration on viscosity and traction coefficient of a steel ball on UHMWPE disk under knee gait cycle conditions M. Alvarez-Vera, L.A. Montoya-Santianes*, I. Dominguez-Lopez, A.L. Garcia-Garcia, J.D.O. Barceinas-Sanchez, <i>Instituto Politecnico Nacional – CICATA Queretaro, Mexico</i>
[P.34]	Preparation of hydroxyapatite scaffolds for biomedical applications from cuttlefish bone S.A. Siddiqi* ¹ , F. Manzoor ¹ , A.A. Chaudhary ¹ , T. Hussain ² , A. Hussain ² , I.U. Rehman ³ , ¹ Interdisciplinary Research Centre for Biomedical Materials, Pakistan, ² G.C. University, Pakistan, ³ The University of Sheffield, UK
[P.35]	The influence of nitrogen content and substrate temperature on the hardness and Young's modulus of silicon nitride coatings for joint implants C. Skjöldebrand* ¹ , M. Pettersson ¹ , S. Schmidt ² , H. Högberg ² , H. Engqvist ¹ , C. Persson ¹ , ¹ Uppsala University, Sweden, ² Linköping University, Sweden
[P.36]	Relating lubricant composition to UHMWPE wear T.J. Low, M. Masen*, P. Cann, <i>Imperial College London, UK</i>
[P.37]	Development of a finite element model to simulate the behaviour of low-friction artificial cartilage replacements M. Santana, M.M. Blum*, <i>Syracuse University, USA</i>
[P.38]	A patterned microtexture to improve longevity of prosthetic knee joints M. Qiu, B. Raeymaekers*, <i>University of Utah, USA</i>
[P.39]	In vitro investigation of wear particles and their activation-potential of the innate immune system R.J.C. Christiansen*, C.M.B. Bonefeld, S.S.J. Jackobsen, M.S.J. Jellesen, <i>Technical University Of Denmark, Denmark</i>
[P.40]	Tribological behaviour of micro arc oxidation coatings on cp-ti for biomedical applications F. Muhaffel*, D. Teker, H. Çimenoglu, <i>Istanbul Technical University, Turkey</i>
[P.41]	A cognitive tribometer using brain activity to discern tactile differences among surfaces with varied frictional and roughness characteristics M.A. Darden, C.J. Schwartz*, <i>Iowa State University, USA</i>

[P.42]	Effect of biomimetic surface texture on friction coefficient in low-conformity metal-UHMWPE bearing systems C. Brown ^{1,2} , Y. Lai ^{1,2} , T. Bryant ^{*1,2} , ¹ Queen's University, Canada, ² Human Mobility Research Centre, Canada
[P.43]	Nanotribological and nanomechanical characterization of Brazilian hair A. Elzubair ^{*3} , N. Baghdadli ¹ , N.F. De Oliveira ³ , F. Munhoz ² , S.S. Camargo JR ³ , G.S. Luengo ¹ , F. Fiat ³ , C. Flor ² , ¹ L'OREAL Recherche and Innovation, France, ² L'OREAL Recherche and Innovation, Brazil, ³ Federal University of Rio de Janeiro, Brazil
[P.44]	The role of human skin condition on active touch of wood and polymers A.C. Rodriguez Urribarrí ^{*1} , X. Zeng ¹ , G. Römer ¹ , E. van der Heide ¹ , ¹ University of Twente, The Netherlands, ² TNO, The Netherlands
[P.45]	Microstructure and corrosion resistance of TiO₂ thin film on 316L stainless steel Y. Liu ^{*1} , J. Wang ¹ , ¹ Nanchang University, China, ² Jiangxi Science and Technology Normal University, China
[P.46]	Anisotropic permeability in the superficial layer enhances biphasic lubrication properties in articular cartilage H. Fujir [*] , K. Imade, Tokyo Metropolitan University, Japan
[P.47]	The experimental study of the rheological performance of the Hyaluronic acid and its lubrication performance on the Ti-UHMWPE Tribo-Pairs B-H. Chen, H-Y. Chu [*] , Kun Shan University, Taiwan
[P.48]	Protein adsorbed film formation and frictional characteristics of CoCrMo-on-UHMWPE sliding pair in reciprocating sliding test D. Necas ^{*1} , Y. Sawae ² , S. Yarimitsu ² , K. Nakashima ² , M. Vrbka ¹ , M. Hartl ¹ , T. Murakami ² , ¹ Brno University of Technology, Czech Republic, ² Kyushu University, Japan
[P.49]	Static friction forces for porous surfaced cobalt-chromium alloys against simulated trabecular bone A.B.I Bodo ^{*1} , G.D.G Langohr ² , J.B. Medley ¹ , D. De Wet ³ , ¹ University of Waterloo, Canada, ² Western University, Canada, ³ Kennametal Stellite Inc, Canada
[P.50]	Experimental procedures significantly affect data accuracy in soft-contact tribology experiments: A multi-site case study J.M Kim ¹ , S.K. Baier ¹ , A.R. Geonnotti ² , N. Selwa ³ , J. Stokes ³ , C. Myant ⁴ , R. Baker ⁵ , J. Hirsch ^{*2} , ¹ PepsiCo Global R&D, USA, ² Johnson & Johnson Consumer Companies, USA, ³ University of Queensland, Australia, ⁴ Imperial College London, UK, ⁵ PCS Instruments, UK
[P.51]	Mapping of surface roughness and corrosion of necks from failed modular hip implants G. McAllister, P.E. Beaulé, S.J. Baskey, M. Nganbe, I. Catelas [*] , University of Ottawa, Canada
[P.52]	Fat properties affect rheological, tribological, and sensory properties of emulsion-filled gels K. Liu ^{*1,2} , M. Stieger ^{1,2} , E. van der Linden ^{1,2} , F. van de Velde ^{1,3} , ¹ TI Food & Nutrition, The Netherlands, ² Wageningen University, The Netherlands, ³ NIZO Food Research, The Netherlands
[P.53]	Surface forces and lubrication studies of artificial salivas for oral dryness (Xerostomia) R. Vargiolu, S. Tupin, C. Mattei-Pailler, H. Zahouani [*] , LTDS - ENISE - ECL, France
[P.54]	Contribution to the experimental determination and the numerical simulation of the behaviour of reconstructed human skin M-A. Abellan [*] , S. Tupin, E. Amaied, J-M. Bergheau, H. Zahouani, Université de Lyon, France
[P.55]	Human skin aging effect on tactile perception: Experimental and modelling studies E. Amaied [*] , M. Djaghoul, R. Vargiolu, J-M. Bergheau, H. Zahouani, E. Amaied, France