

Table of Contents

Effects of Different Hardness in Bionic Soles on Lower Limb Biomechanics Y.Y. Zhang, S.Q. Shen, J.S. Baker and Y.D. Gu	1
Numerical Modeling of Blood Flow in a Healthy Aorta and Aorta with Stent A.H. Belaghiti, B. Aour, M. Larabi and S. Mebarki	13
Determination of the Optimum Material Gradient for a Functionally Graded Endodontic Prefabricated Post Using a Sub-Problem Approximation Method W.M.K. Helal, F.C. Jiang and D.Y. Shi	24
Employing Image Processing Techniques and Artificial Intelligence for Automated Eye Diagnosis Using Digital Eye Fundus Images A.M. Alqudah, H. Alquraan, I.A. Qasmieh and A. Al-Badarneh	40
Simulator of Foetal Phonocardiographic Recordings and Foetal Heart Rate Calculator A. Joseph, R. Martinek, R. Kahankova, R. Jaros, J. Nedoma and M. Fajkus	57
The Impact of Hybrid Nano-Materials in Tooth Tissue Restoration C. Suhonen	65
Synthesis of N,N-Diethyl, N-Methyl Chitosan Chloride with Certain Quaternization Degree and Molecular Spectroscopic and Thermo-Morphological Study of the Alkylation S.Z. Tapdiqov, S.F. Safaraliieva, P. Theato, N.A. Zeynalov, D.B. Taghiyev, M.G. Raucci and M.X. Hasanova	77
The Role of Adipose Derived Mesenchymal Stem Cells (MSCs) to Control Autoimmune Disease S. Purwati, L.D. Rahmawati, D. Awalia, F.A. Rantam and U.Y. Bintoro	89
Effect of Platelet-Rich Plasma and Amniotic Membrane in Patients with Rotator Cuff Repair H. Suroto, A. Pribadi, D.N. Utomo, F. Mahyudin and L. Widhiyanto	98