

Contents

Petr Písařík, et al.: Optics and Optometry at CTU, Faculty of Biomedical Engineering	1
Tereza Suchomelová, et al.: Color vision and its changes in patients with cataract	6
Klára Potěšilová, et al.: Comparison of subjective and objective methods for examination of refractive errors	14
Anna Potěšilová, et al.: Effect of corrective optical aids on visual acuity	22
Barbora Hamouzová, et al.: Influence of light conditions on color vision and its examination	29
Bára Ježková, et al.: Functionality of driver's lenses	36
Eliška Klabíková, et al.: First-time wearers of contact lenses	51
Markéta Žáková: Myopia control	58
Adéla Králová, et al.: Presbyopia and adaptation to presbyopic correction	65
Tereza Peschková, et al.: The effect of antireflection layer and color filters on vision changes	71
Aneta Sauerová, et al.: Aids for visually impaired students and possibilities of providing them during their studies	77
Richard Dupal, et al.: Temperature impact on photochromatic frame lenses	83
Lenka Jabůrková, et al.: Adaptation on glasses correction in real conditions	90
Eliška Šalounová, et al.: Prevalence of refractive errors in Czech Republic	96
Jiří Vaňásek, et al.: Evaluation of anterior chamber parameters and factors affecting them	102
Tereza Puldová, et al.: Therapeutic contact lenses for local drug release	104
Tereza Dominová, et al.: Ocular straylight in patients with arthephakia	106
Markéta Hábová, et al.: Disorders of colour vision and diagnosis	112
Veronika Vrbová, et al.: Use of the Brock string for diagnostic purposes	119
Ilona Fejfarová, et al.: Selected parameters of contact lenses and its measurements	128
Nikol Zimová, et al.: Intraocular pressure in ophthalmological practice	135
Kateřina Ditrichová, et al.: Short-term effect of soft contact lenses on the refraction of the eye	143
Barbora Poulová, et al.: Effect of cataract surgery by the patients with and without diabetes	150
Nicola Šefrnová, et al.: Measurement of the Size of the Irido-cornea Angle	157
Tereza Svejková, et al.: Cataract surgery after refractive operations	164
Kateřina-Nela Volfová, et al.: Effect of perceptual learning on visual functions in myopic patients	169

Klára Modrová, et al.: Comparison of tear film analysis methods	177
Jáchym Velebný, et al.: The effect of dietary supplements on vision	183
Adéla Kolbabová, et al.: Contrast sensitivity with reduced spherocylindrical correction	190
Klára Veselovská, et al.: Vision therapy for convergence insufficiency	195
Košinová, L., et al.: Biocompatible laser-treated material for improving the properties of implants	202
Iva Klimešová, et al.: Orientation of blind in space and obstacle detection aids that help with it	211
Ján Varga, et al.: Ultrasenzitive detector based on functionalized nanofibers in odorology	219
Leontýna Varvařovská, et al.: The Optimization of the Parameters of Nanofiber Membranes Suitable for the Pathogen Interception	229
Aleksei Pashchenko, et al.: Ultrasensitive bionanosensors based on functionalized nanofibers for orthopedic periprosthetic complications	238
Štěpánka Tomášková, et al.: Modification of implant surface properties by thin layer	240
Radka Staňková, et al.: Analysis of mechanical properties of cells	242
Petra Průchová, et al.: Mechanical properties of biocompatible layers for use in medicine	244
Kristýna Jirásková, et al.: Automatic evaluation of origami DNA images from atomic microscopy	248
Kateřina Nevšimalová, et al.: Cultured neurons as a platform for assessing psychoactive substances	250
Jiří Kubín: Miniaturized sensor node for three-electrode ECG signal sensing in the field conditions	252
Matěj Krása: 3D UWB radar system for non-invasive breast cancer diagnosis	254
Michaela Součková: A tool for RNAseq data processing in patients with leukemia	256
Kateřina Štěpánová: Correlation of brain morphology and gait of patients with presymptomatic and manifested Parkinson's disease	258
Jovan Gliguroski, et al.: Implementation of the Metaverse in the practical teaching	260
Natálie Baborová: Educational game for children with type 1 diabetes focusing on carbohydrate counting	266
Veronika Bůžková: Processing, storage and aggregation of genetic variants	271
Písařík, P., et al.: Surface modification of 3D-printed metal samples using thin films	273
Magdaléna Zbořilová, et al.: Examination of vergence facility as an alternative to the examination of fusional reserves	280