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Employment

Department of Chemical and Materials Engineering
Nazarbayev University
Jun 18 2015 → present

Research outputs

Poly-L-arginine modifications alter the organization and secretion of collagen in SKH1-E mice

Boddupalli, A., Akilbekova, D. & Bratlie, K. M., Jan 2020, In: *Materials Science and Engineering C*. 106, 110143.

Brillouin spectroscopy and radiography for assessment of viscoelastic and regenerative properties of mammalian bones

Akilbekova, D., Ogay, V., Yakupov, T., Sarsenova, M., Umbayev, B., Nurakhmetov, A., Tazhin, K., Yakovlev, V. V. & Utegulov, Z. N., Sep 27 2018, In: *Journal of Biomedical Optics*. 23, 9, p. 1-11 11 p., 097004.

Biocompatible scaffolds based on natural polymers for regenerative medicine

Akilbekova, D., Shaimerdenova, M., Adilov, S. & Berillo, D., Jul 15 2018, In: *International Journal of Biological Macromolecules*. 114, p. 324-333 10 p.

The effect of polarized light on the organization of collagen secreted by fibroblasts

Akilbekova, D., Boddupalli, A. & Bratlie, K. M., Apr 1 2018, In: *Lasers in Medical Science*. 33, 3, p. 539-547 9 p.

All-plastic-fiber chemical H₂S sensor on smartphone

Sultangazin, A., Kusmangaliyev, J., Aitkulov, A., Akilbekova, D., Olivero, M., Tosi, D. & Dukenbayev, K., Jan 1 2018, *Optical Fiber Sensors, OFS 2018*. OSA - The Optical Society, Vol. Part F124-OFS 2018.

All-POF Chemical H₂S sensor designed for smartphone operation

Aitkulov, A., Akilbekova, D., Tosi, D. & Olivero, M., Jan 1 2018, In: *Proceedings of IEEE Sensors*. 2018-January, 8630301.

Brillouin light scattering spectroscopy for tissue engineering application

Akilbekova, D., Yakupov, T., Ogay, V., Umbayev, B., Yakovlev, V. V. & Utegulov, Z. N., Jan 1 2018, *Optical Elastography and Tissue Biomechanics V*. SPIE, Vol. 10496. 1049611

Design of a Smartphone Plastic Optical Fiber Chemical Sensor for Hydrogen Sulfide Detection

Sultangazin, A., Kusmangaliyev, J., Aitkulov, A., Akilbekova, D., Olivero, M. & Tosi, D., Nov 1 2017, In: *IEEE Sensors Journal*. 17, 21, p. 6935-6940 6 p.

Patient specific in situ 3D printing

Akilbekova, D. & Mektepbayeva, D., Apr 19 2017, *3D Printing in Medicine*. Elsevier, p. 91-113 23 p.

Poly-L-arginine based materials as instructive substrates for fibroblast synthesis of collagen

Bygd, H. C., Akilbekova, D., Muñoz, A., Forsmark, K. D. & Bratlie, K. M., Sep 1 2015, In: *Biomaterials*. 63, p. 47-57 11 p.

Quantitative characterization of collagen in the fibrotic capsule surrounding implanted polymeric microparticles through second harmonic generation imaging

Akilbekova, D. & Bratlie, K. M., Jun 30 2015, In: PLoS ONE. 10, 6, e0130386.

Macrophage reprogramming: Influence of latex beads with various functional groups on macrophage phenotype and phagocytic uptake in vitro

Akilbekova, D., Philip, R., Graham, A. & Bratlie, K. M., Jan 1 2015, In: Journal of Biomedical Materials Research - Part A. 103, 1, p. 262-268 7 p.

Color center creation in LiF crystals irradiated with Xe, Kr and N ions: Dependence on fluence and beam current density

Dauletbekova, A. K., Akilbekov, A. T., Zdorovets, M. V., Vassil'Eva, A. F. & Akilbekova, D. A., Oct 1 2010, In: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms. 268, 19, p. 3005-3008 4 p.