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## Development of the technology of manufacturing a ceramic tip of a resectoscope

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## **Abstract**

© Published under licence by IOP Publishing Ltd. The development of medical technology is strongly correlated with the development of new materials and the technology of their processing. At the moment, the most common type of surgery is resection of the prostate gland, for its use a resectoscope is used. In this work, the problem of increasing the mechanical characteristics of ceramic tips of resectoscopes is solved. The material of yttrium stabilized zirconia has been tested and manufacturing technology based on CAD / CAM and heat treatment has been proposed.

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## References

- [1] Belov S V, Danileyko Y K, Shulutko A M, Semikov V I, Gryaznov S E, Osmanov E G, Gorbacheva A V, Patalova A P, Osiko V V and Salyuk V A 2017 Use of high-tech electrosurgical tools to improve the efficiency and safety of operations on the thyroid gland Medical equipment 301 8-11
- [2] Kashapov L N, Rudyk A N and Kashapov R N 2014 Applying 3D-printing technology in planning operations of cancer patients IOP Conf. Ser.: Mater. Sci. Eng 69 012016
- [3] Fattakhova A N, Khramova A Y, Belinite M A, Kashapov R N and Kashapov N F 2014 Human and animal cells adhesion on the modified glass IOP Conf. Ser.: Mater. Sci. Eng 56 456-58
- [4] Kashapov R N, Korobkina A I, Platonov E V and Saleeva G T 2014 The method of manufacture of nylon dental partially removable prosthesis using additive technologies IOP Conf. Ser.: Mater. Sci. Eng 69 012026
- [5] Gavrilova V A, Kashapov N F and Kashapov R N 2011 Plasma application of protective polymer-powder coatings for ultrasonic sensors Meditsinskaia tekhnika 43-46
- [6] Gavrilova V A, Kashapov N F and Kashapov R N 2011 Plasma application of protective polymer-powder coatings to ultrasonic sensors Biomedical Engineering 45 198-00
- [7] Kashapov L N, Kashapov N F, Kashapov R N and Pashaev B Y 2016 The application of additive technologies in creation a medical simulator-trainer of the human head operating field IOP Conf. Ser.: Mater. Sci. Eng 134 012011
- [8] Akhmetov I D, Kashapov N F and Kashapov R N 2014 Modernization of clamping unit of draft of endosurgical monopolar forceps IOP Conf. Ser.: Mater. Sci. Eng 69 012002