

## **New Opportunities for the Development of Education at the Technical University of Liberec**

Specific objective A2: Development in the field of distance learning, online learning  
and blended learning

**NPO\_TUL\_MSMT-16598/2022**



# **KNT\_TNA\_ Comparison of DC and AC spinning**

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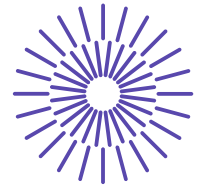


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**Tutorial objectives:**

During the tutorial, change the concentrations of the polymer solutions and observe their effect on the DC spinning process. In the second part of the exercise, use AC spinning and repeat the experiment with different concentrations of polymer solutions and again observe the effect on the spinning process.

**Method:**

- 1) Check the connection of the devices used and draw their diagram.
- 2) For DC spinning, choose the distance of the collector from the electrode.
- 3) Apply a drop of polymer solution to the metal rod.
- 4) Turn on the high voltage source and gradually increase the electric voltage and observe the value of the critical voltage.
- 5) Vary the concentrations of the polymer solutions and observe the effect on the DC spinning process.
- 6) Observe the deposition of the fibrous layer.
- 7) Compare DC spinning with AC spinning.
- 8) Apply a drop of polymer solution to the metal rod.
- 9) Turn on the high voltage source and gradually increase the electric voltage and observe the effective voltage value.
- 10) Vary the concentrations of the polymer solutions and observe the effect on the alternating spinning process.

