

**Секція 4**  
**Інтеграція смарт технологій в текстильну та фешн**  
**індустрії**

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**3D PRINTING TECHNOLOGY IN TEXTILE  
AND FASHION INDUSTRY**

**Purpose.** This papers aims to explore the applicability of 3D printing materials using thermoplastic polyurethane (TPU) for the development of protective gear.

**Scientific novelty.** In the fashion industry, three-dimensional (3D) printing has been used by designers and engineers to create everything from accessories to clothing, but only a few studies have investigated its applicability in personal protective equipment.

**Practical value.** One of the most significant technologies of the fourth industrial revolution is 3D printing. Additive manufacturing and 3D printing are the subject of intensive research and development (methods, materials, new techniques, application areas, etc.). The purpose of this study is to develop 3D printing samples and study conditions related to TPU.

**Keywords:** fashion industry, additive manufacturing, 3D printing, design, protective equipment, thermoplastic polyurethane.

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