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(71) Applicant: **BELLASENO GMBH** [DE/DE]; Deutscher
Platz 5a, 04103 Leipzig (DE).

(72) Inventors: **KHANI, Navid**; Shakespearestrasse 5, 04107
Leipzig (DE). **LUCAROTTI, Sara**; Strasse des 18. Ok-
tober 26, 04103 Leipzig (DE). **CHHAYA, Mohit**; Pfaf-
fendorferstrasse 14, 04105 Leipzig (DE).

(74) Agent: **SCHIWECK, Wolfram** et al.; Schiweck Weinzierl
Koch, Patentanwälte, Ganghoferstrasse 68b, 80339 Munich
(DE).

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(54) Title: IMPLANTS AND METHOD FOR FORMING AN IMPLANT

(57) Abstract: Embodiments herein relate to a three-dimensional implant for tissue reconstruction or tissue augmentation for insertion into a patient. The implant comprises a plurality of strands forming a three-dimensional structure, which comprises a plurality of hollow channels. Each hollow channel comprises a plurality of sidewalls. A sidewall comprises a plurality of strand segments and a plurality of gaps arranged alternately so that a gap is formed between adjacent strand segments of the sidewall. The gap comprises a gap length (gl) and a resting gap height (gh). The plurality of gaps are reversibly expandable gaps. Adjacent strand segments comprise a deflection capability (δ) based on an object to be received by the reversibly expandable gap. A radius (R) of the plurality of strands and a gap lengths (gl) of a reversibly expandable gap is based on a yield strength (δ_{yield}), the elastic modulus (E) of the material and a deflection capability δ of the adjacent strand segments forming the reversibly expandable gap.



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