

Datum 04. Oktober 2023

Abschlussarbeit/Projektarbeit: Literature research on auxetic coronary stents

Project description:

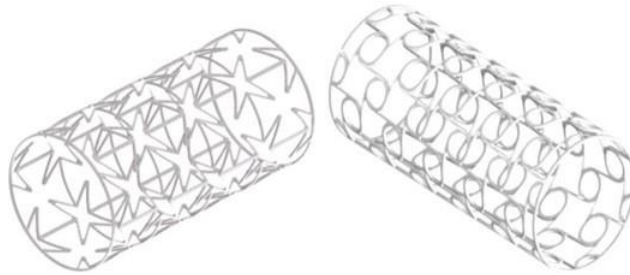


Figure 1: Auxetic stents [1].

Cardiovascular heart diseases is one of the major area of concern in the modern era. Stents are generally get implanted in the coronary arteries to treat this problem. The generally used stents have problems in terms of thrombosis, restenosis etc. In this regard, stents with auxetic structure (negative Poisson's ratio) have shown great promise to solve these issues. To have an overview of this field, this literature research will focus on finding related research works where auxetic stents have been applied, in particular the structural based advantages that it provided.

Work package include:

- Literature research on cardiovascular stents
- Literature research on advantages of auxetic structures as stents

Basic requirements:

- Basic understanding of material science
- Strong interest in the field of implants development

If interested, please contact: Gargi Shankar Nayak, M. Sc.

Bibliography

- [1] Amin, F., Ali, M. N., Ansari, U., Mir, M., Minhas, M. A., & Shahid, W. (2015). Auxetic coronary stent endoprosthesis: Fabrication and structural analysis. *Journal of Applied Biomaterials and Functional Materials*, 13 (2), E127–E135. <https://doi.org/10.5301/jabfm.5000213>

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