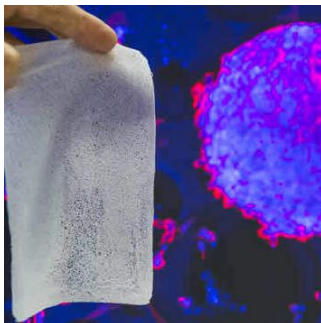

MedTech Day



This year's MedTech Day was opened with the statement "Nature didn't intend for us to live so long." Alex Dommann, a member of Empa's management team and head of the Materials meet Life department referred to our ageing society and how cutting-edge medical technology has made it possible to support and in some cases, completely restore many bodily functions.

During the MedTech Day, participants from research and industry learned about the state of the art technology in healthcare including bandages, specialised sticking plasters and novel coatings for implants. Empa researcher Jakob Kübler and his team in the High Performance Ceramics department that develops parts for cardiac pacemakers demonstrated a device that can be anchored in the heart muscle by means of an electrode. In conventional pacemakers, the anchor is made from plastic and fibrosis often forms around this material, forcing the pacemaker to expend more energy and its batteries to run out more frequently.

Kerstin Thorwarth and her team at the the Nanoscale Materials Science department demonstrated a coating they have developed for a particular type of disc replacement known as cages by utilising the advantages offered by thermoplastic polymers (polyether ether ketone, or PEEK for short) and from titanium.

Katharina Maniura, director of the Biointerfaces department, and her team have investigated how cells and tissues respond to different innovative implant materials and are focused on determining the behaviour of each implant material specifically for each new application. Her team is working on developing suitable materials for integration into different tissues and to avoid complications such as inflammation following implantation.

Empa researcher Qun Ren investigates bacteria that may form colonies both on implants and on medical devices. Her team has developed a technique for purging medical devices such as endoscopes from bacteria in order to make it safe to reuse them for the next patient.

During MedTech Day, representatives of the MedTech sector also discussed material development, surface treatment and material characterisation in medical technology with Empa scientists and asked questions. The event provided a great opportunity to build bridges between research and practice and to familiarise partners from industry with the most recent discoveries and technologies.

Source: Empa Materials Science & Technology

Image Credit: KTI, Alessandro Della Bella

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