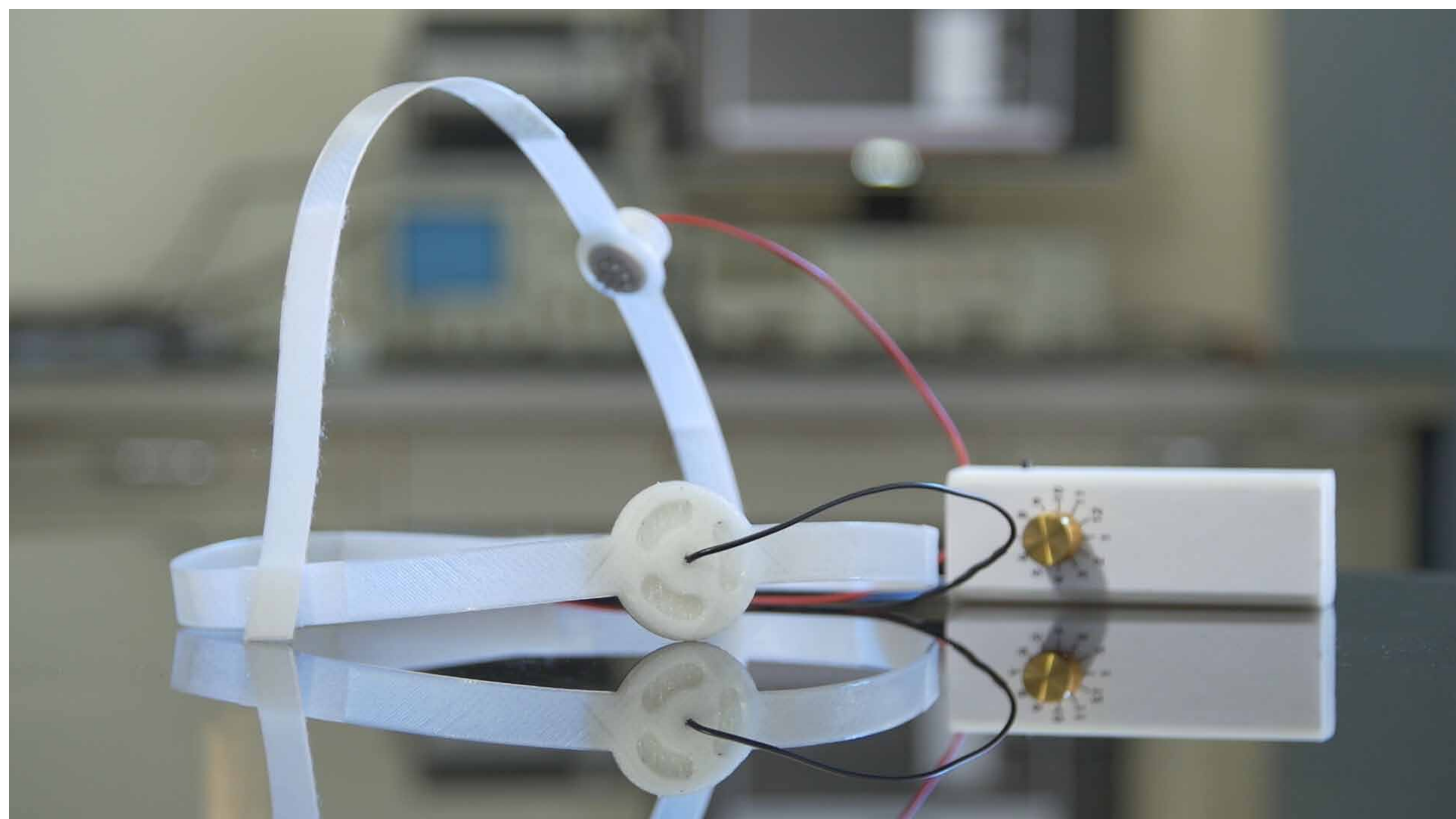




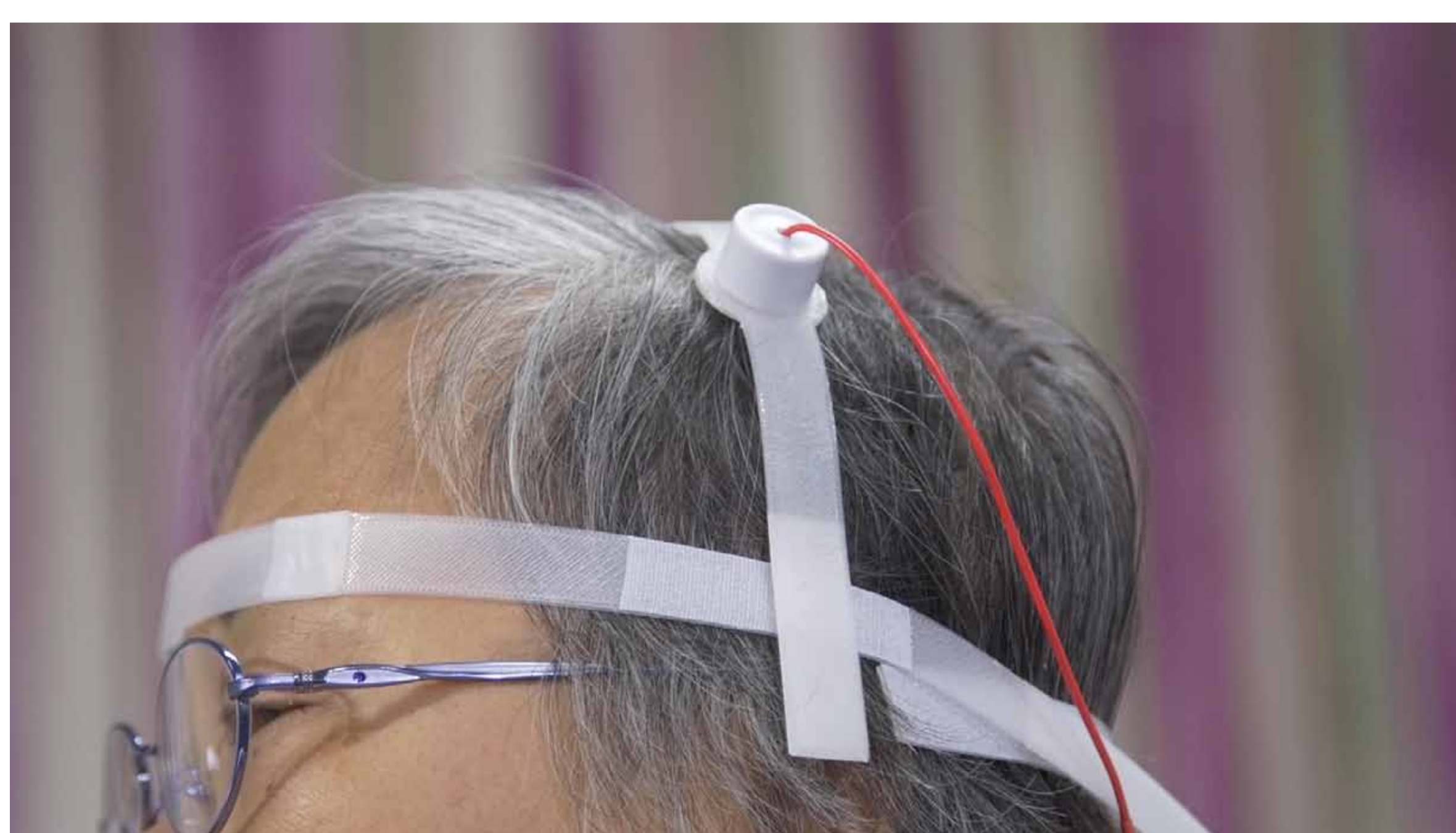
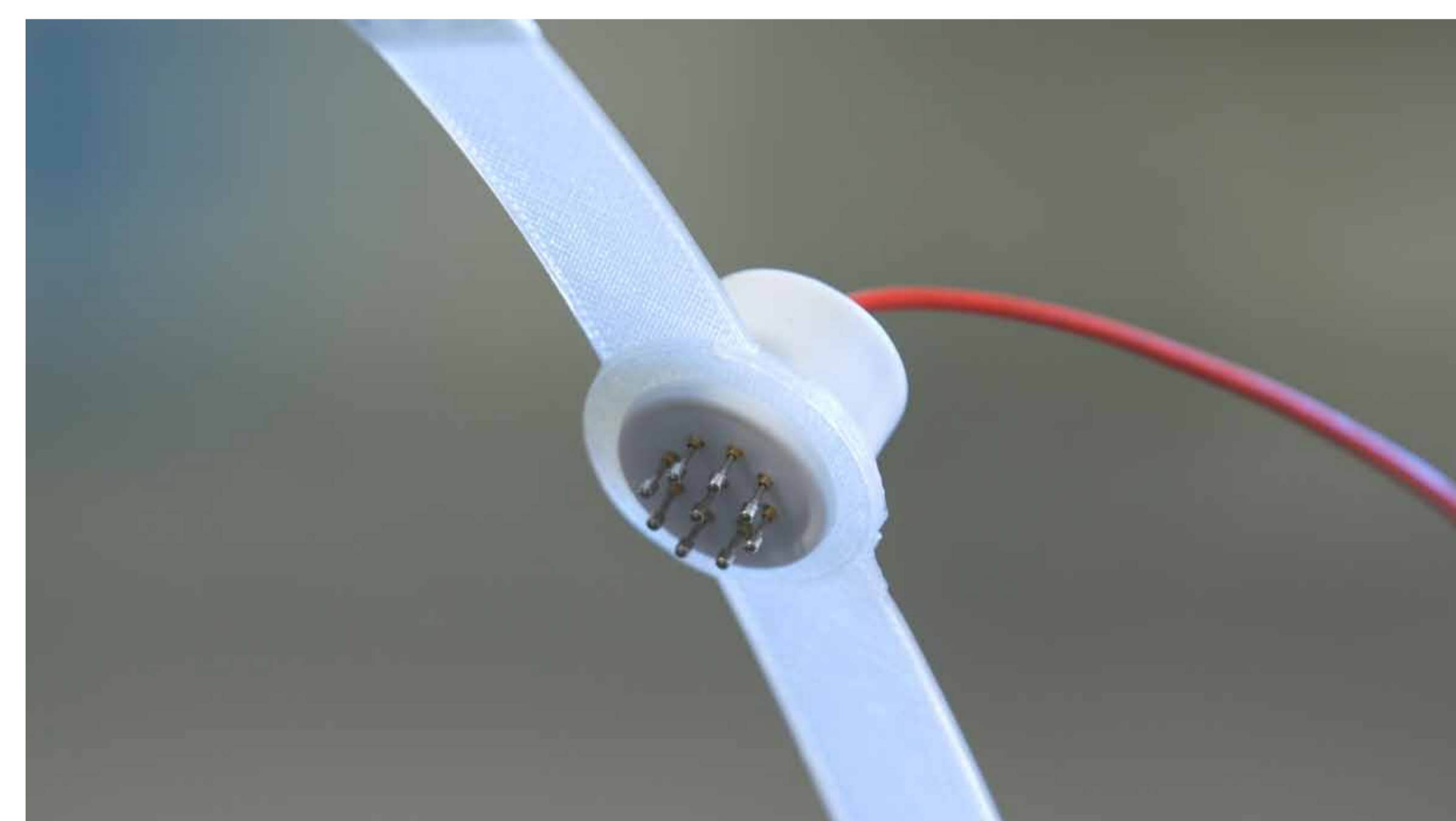
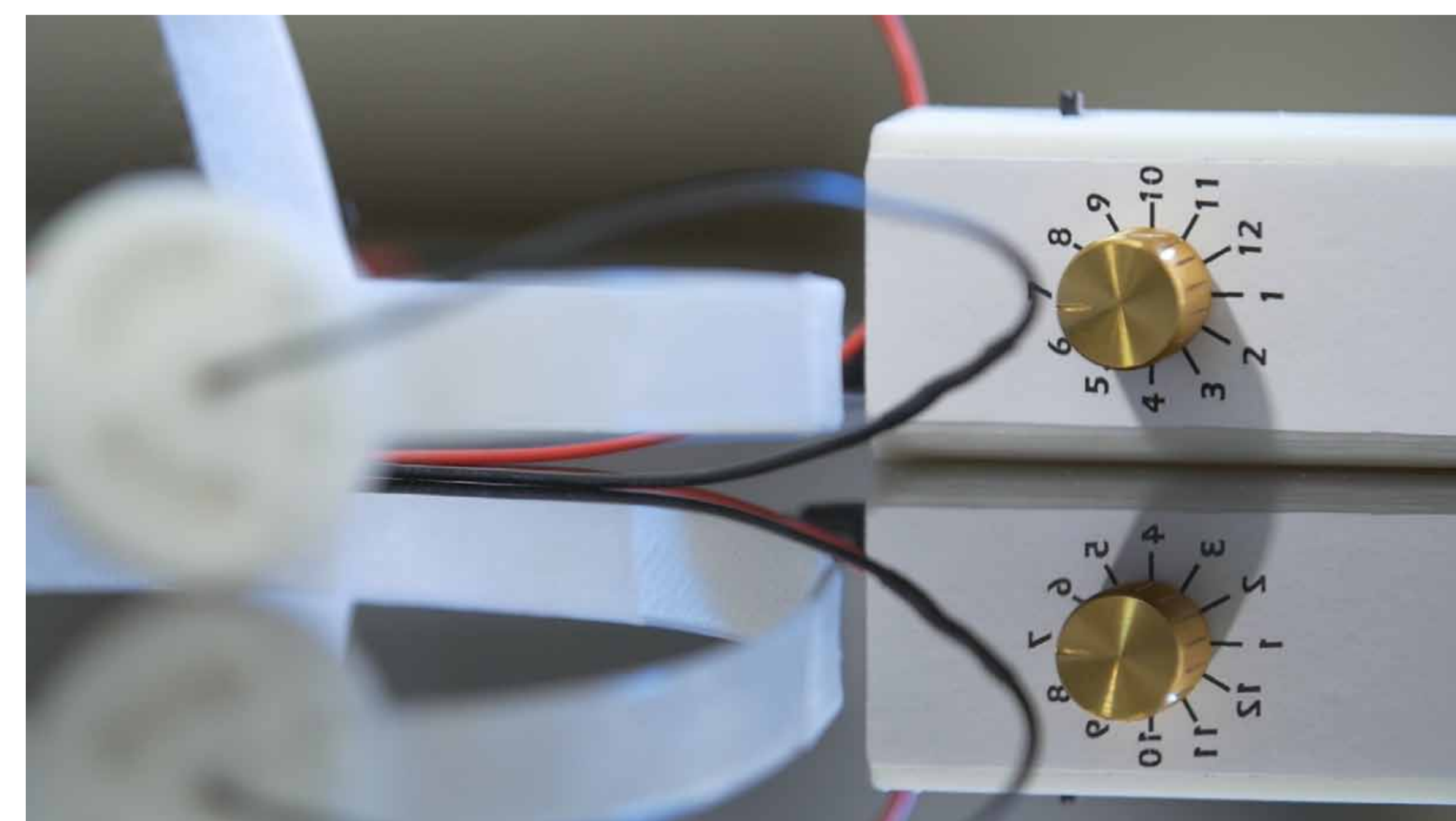
A Wearable Transcranial DC-Stimulator to Help Prevent Degenerative Brain Diseases



We have developed a wearable transcranial DC-stimulator that is portable and easy to use to help prevent degenerative brain diseases.

THE NEED

Transcranial direct current stimulation (tDCS) is a non-invasive and safe brain stimulation device for modulation of brain status. Scientific studies have shown the effect of tDCS in adjusting brain membrane's potential, with either enhancement or inhibition of neural activity. The efficacy of tDCS on improving cognitive ability and in treatment of brain diseases such as depression, stroke, aphasia and mild cognitive impairment has also been reported. A wearable tDCS that is portable, safe and easy to use will allow patients to use the device at home.



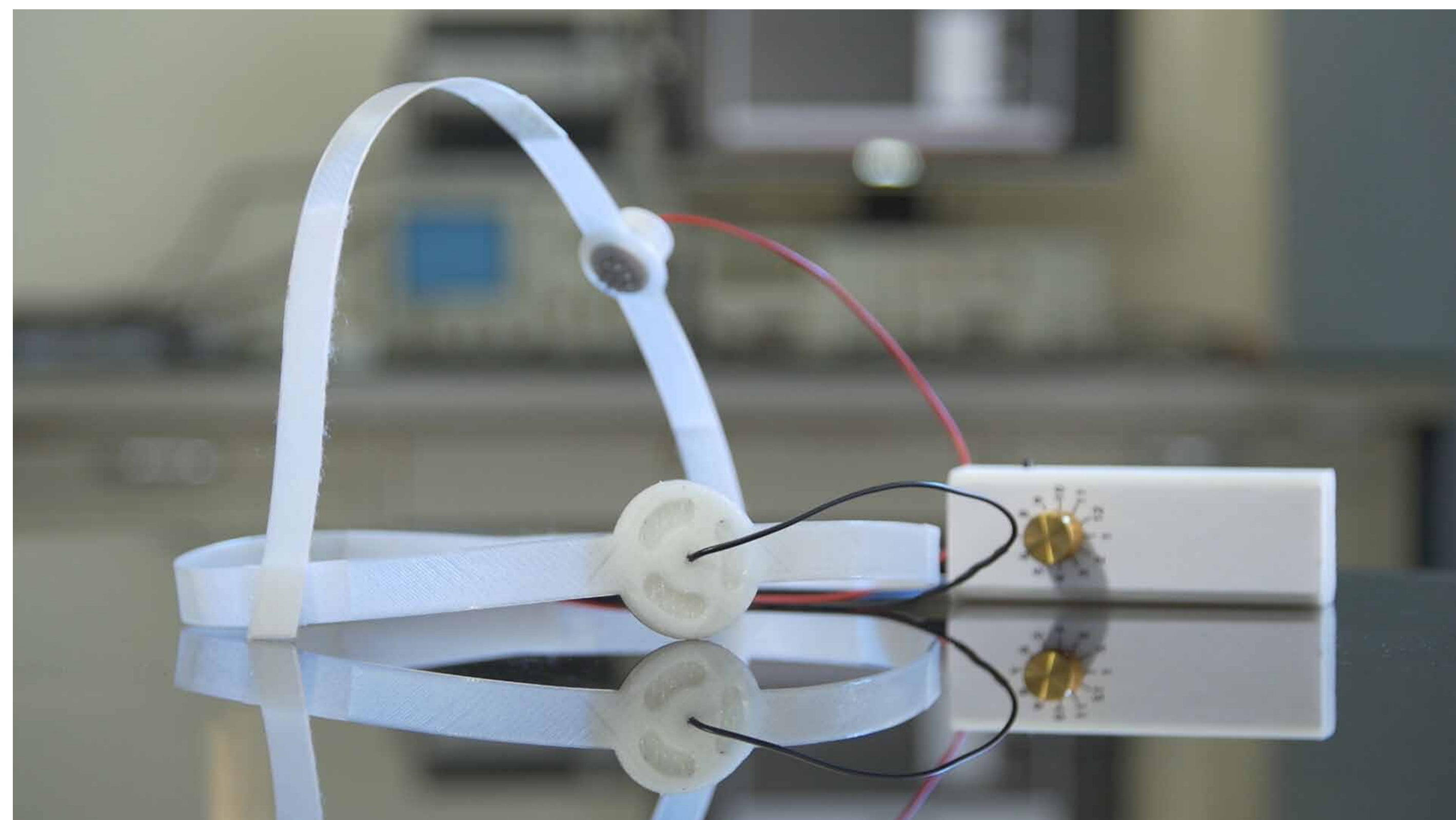
OUR NEW TECHNOLOGY

A research team in HKU led by **Dr Yong Hu**, Associate Professor of the Department of Orthopaedics and Traumatology, has developed a wearable transcranial DC-stimulator to help prevent degenerative brain diseases.

The tDCS is a variable stimulator, which could be used to monitor a patient's brain activities, and achieve pain relief through stimulation of regions of the brain (e.g. for low back pain). This tDCS product comprises a battery-driven direct current stimulator and two types of surface dry electrodes. It is easy to operate and easy to learn, and its portable design makes it possible for personal use at home.



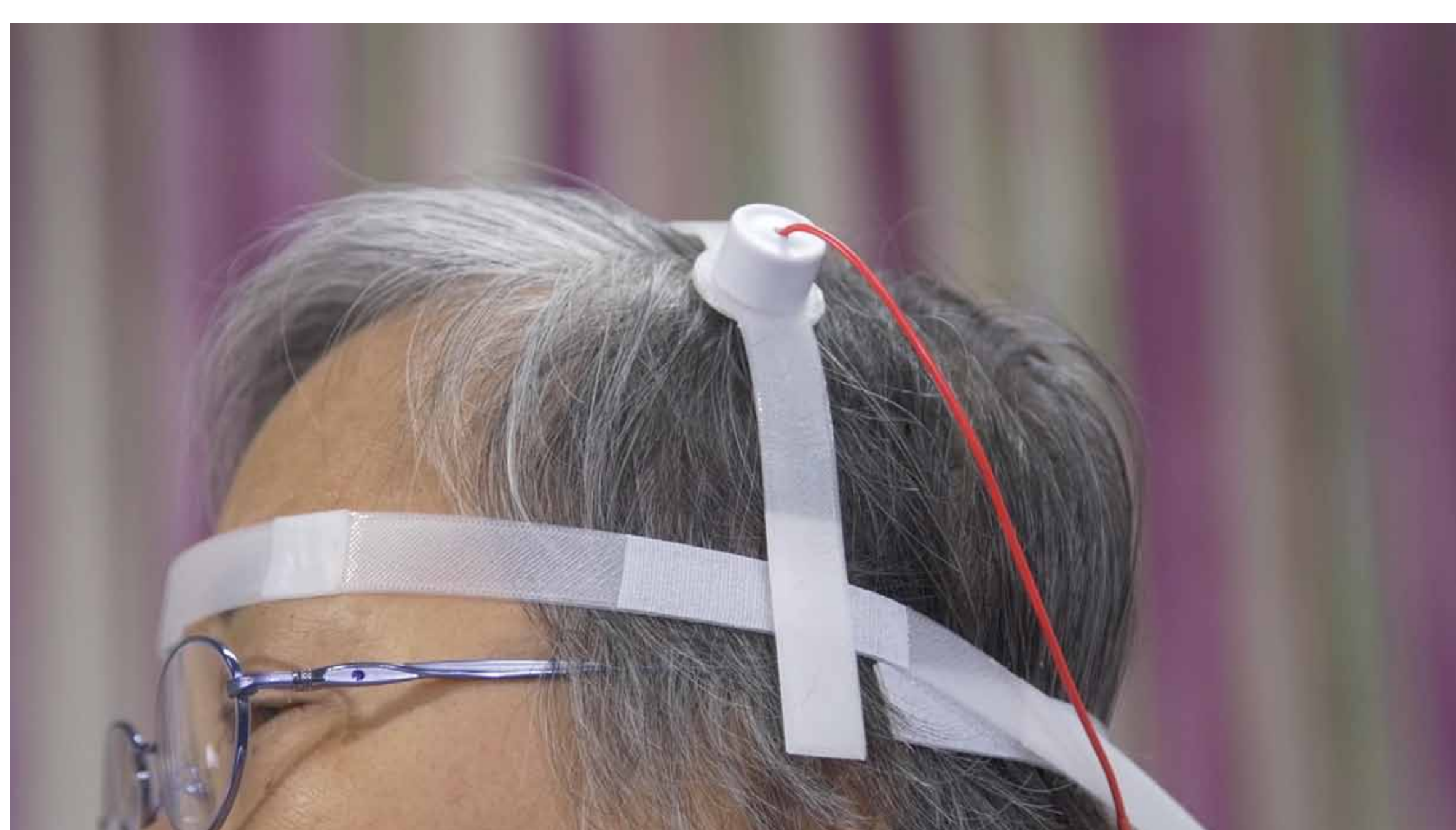
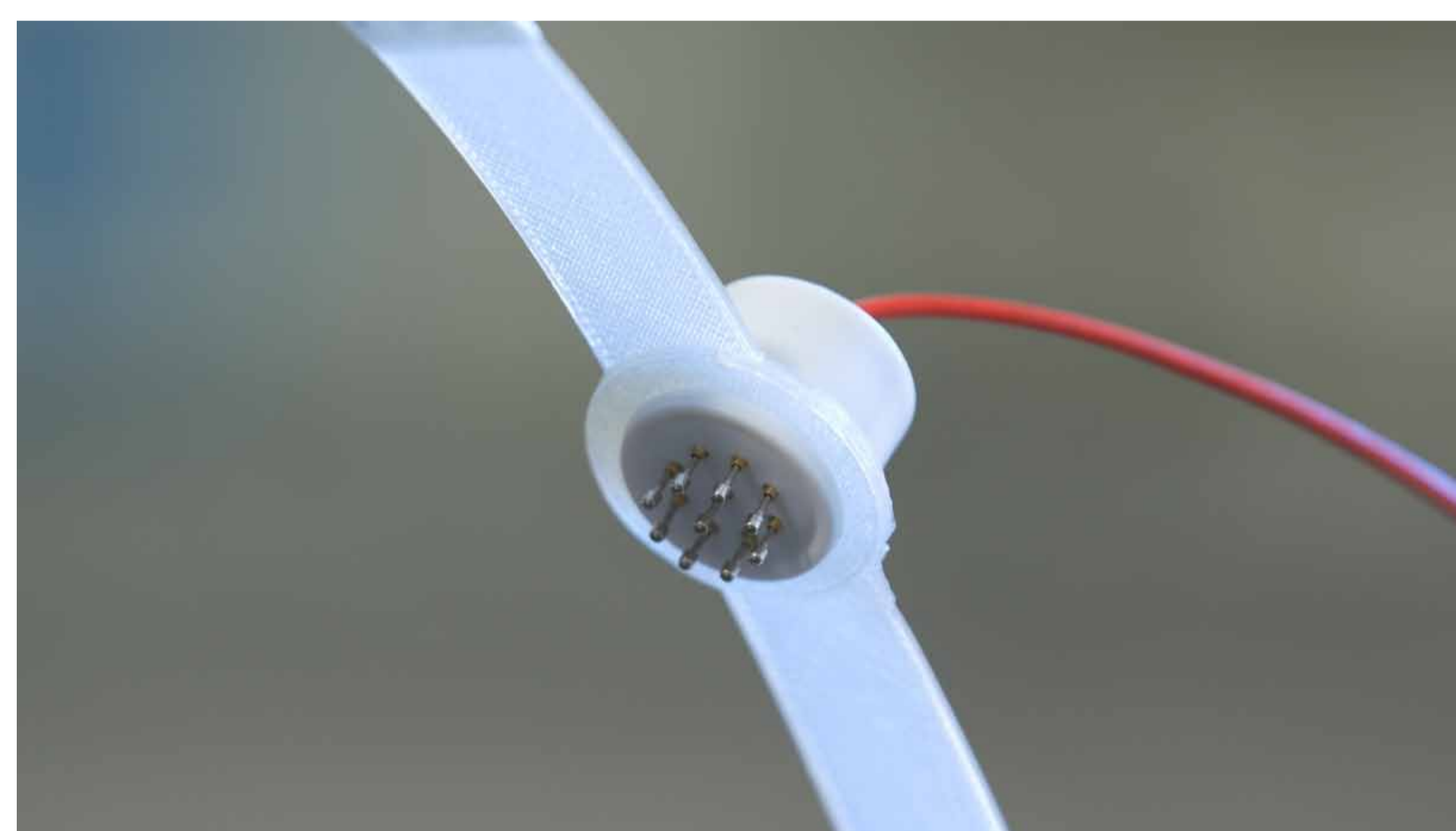
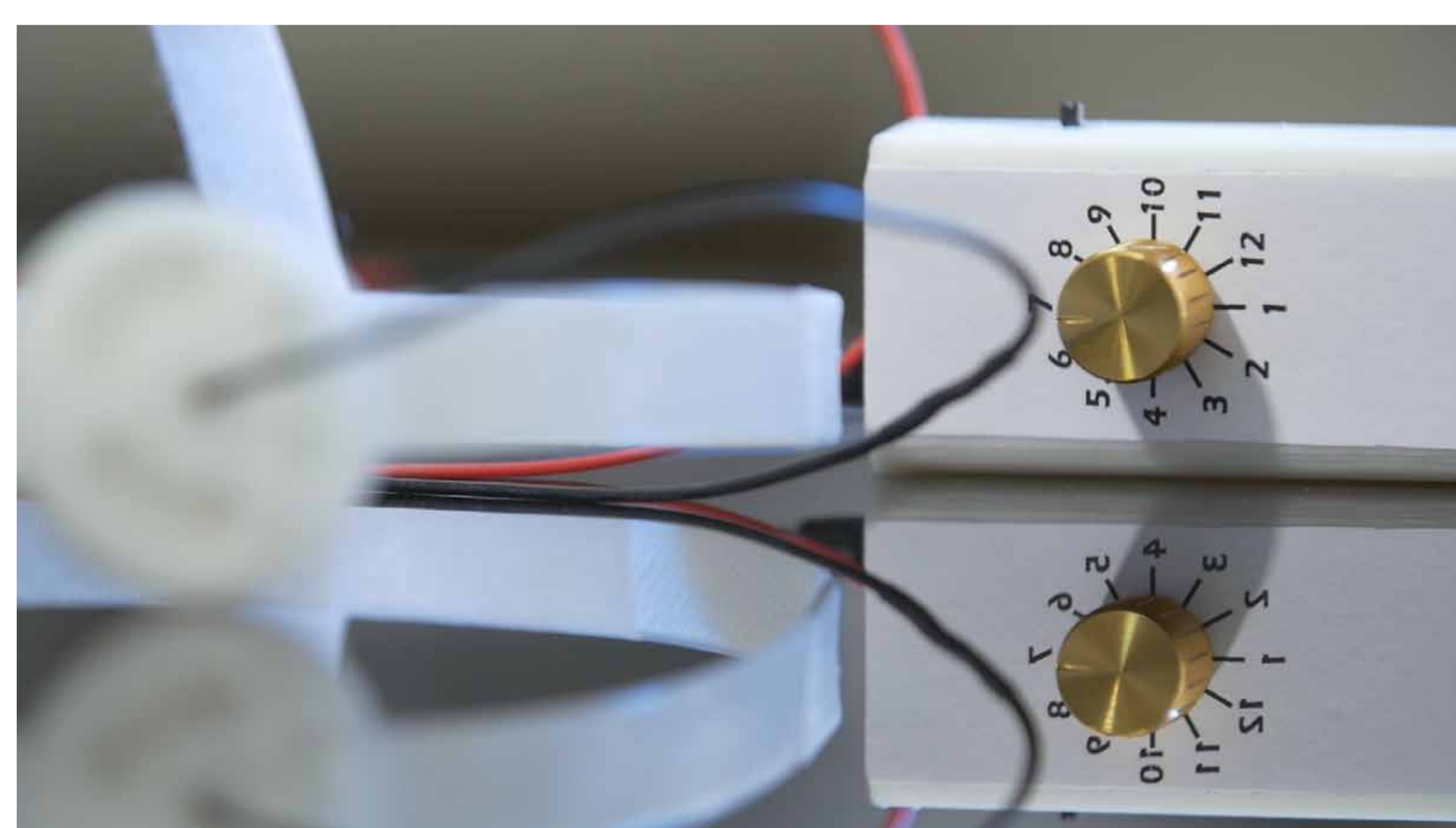
可穿戴式經顱直流電刺激 預防退化性腦疾病



我們研發了一種便攜式、容易使用的可穿戴式經顱直流電刺激器幫助預防退化性腦疾病。

當前需要

經顱直流電刺激(tDCS)是一種安全的非侵入式腦部神經調控科技。研究顯示，tDCS可增強或抑制腦部的神經活動，從而調整腦膜的潛力。研究報告也指出tDCS對於改善認知能力以及治療抑鬱、中風、失語症及認知功能障礙等多種腦科疾病都有效用。可穿戴式的tDCS 如便攜、安全和容易使用，就可以方便病人在家中使用。



港大研發的新技術

由香港大學矯形及創傷外科學系副教授**胡勇博士**領導的研究組，研發了一種可穿戴式經顱直流電刺激器，幫助預防腦退化方面的疾病。

tDCS多變刺激器，可用於監測病人的大腦活動，並透過刺激病人腦部的神經活動，舒緩病人的痛症(如腰背疼痛)。這tDCS產品的組成部分包括電池驅動的直流電刺激控制器和兩種用於輸出刺激電流的乾電極。它的操作方便，簡單易學，便攜式的設計可於家中使用。