

# **Design, Fabrication and Analysis of Customized High-Density MXene Bioelectronics for Upper and Lower Limb Muscles**

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Poster A14

**SUNFEST REU Program**

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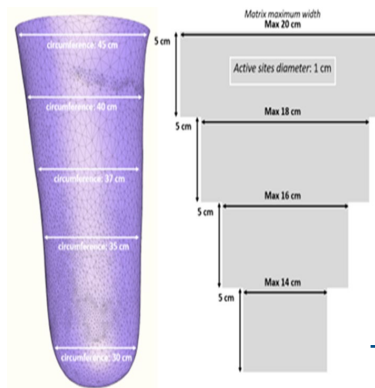
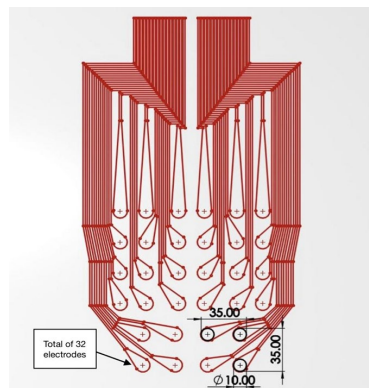
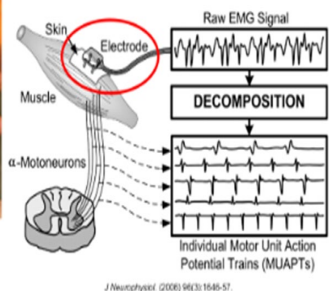
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## Proposed Solution: Customized MXene Bioelectronics

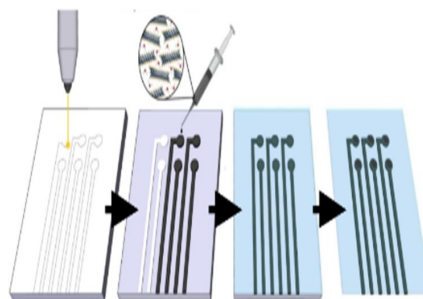
### Shortcomings of current (EMG) technologies



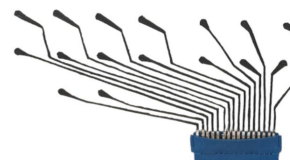
Disposable Ag/AgCl electrodes



Adapted from: Micera lab, Scuola Superiore Sant'Anna

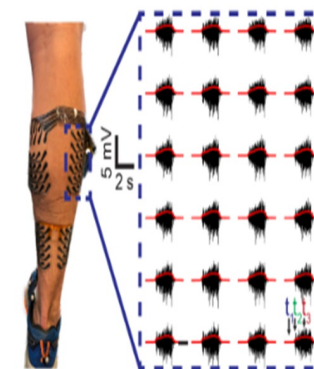


Driscoll N, Vitale F, et al., *Sci. Trans. Med.*, 2021, 13(612): ab8629

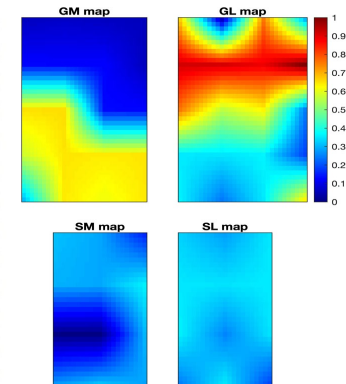


Lower arm (HDsEMG) MXene arrays

### MXtrode applications



Adapted from: Garg et al., *Small Methods.*, (2022)



Adapted from: Maggie Wagner, [Unpublished figure]