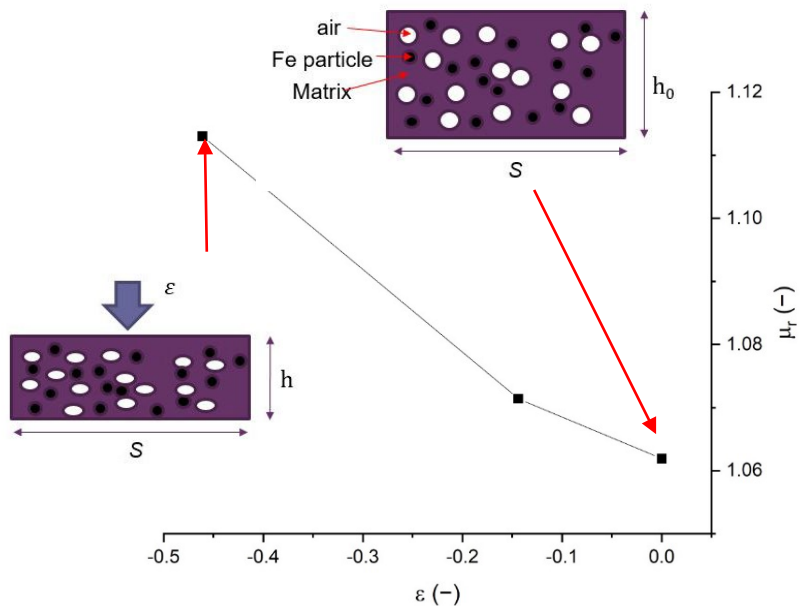


Multi-Sensory Flexible Skin

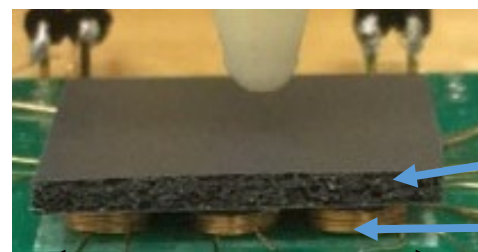
Topic for FY2021

Magnetic foam for strain sensing – artificial touch sensor application

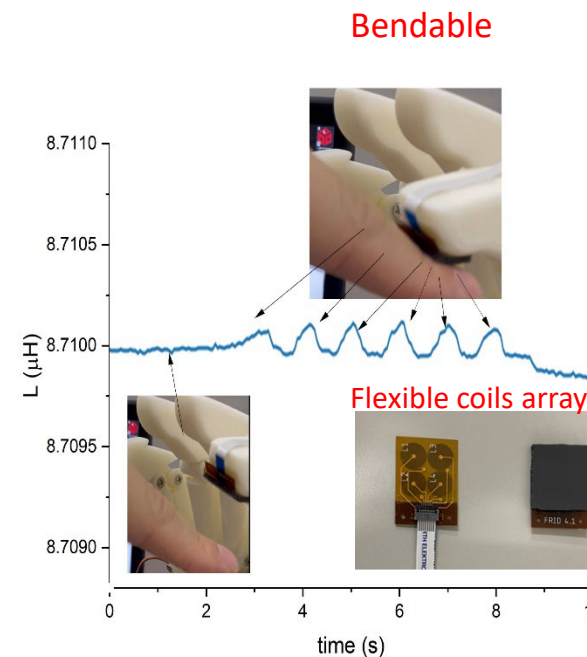
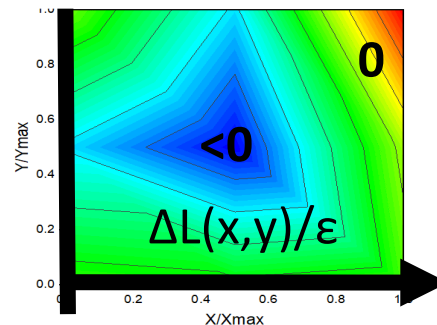
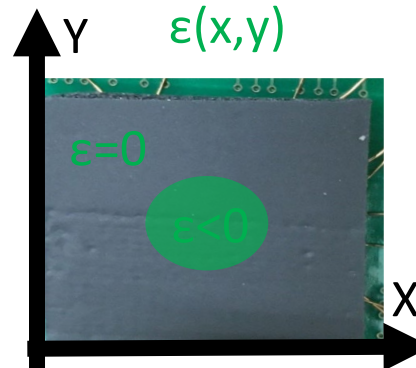
The magnetic permeability of composite material, under compression ϵ , is increasing : $\mu_r \nearrow$



- Polymers 2022, 14, 834
- Smart Mater. Struct. 2022, 31, 025018
- Patent submitted



Soft Magnetic (Foam)
Coils Array





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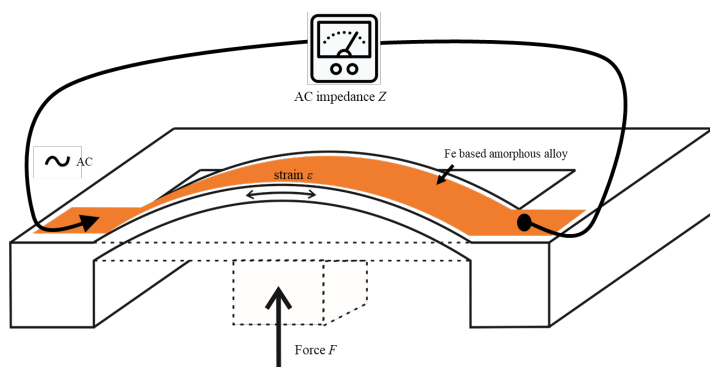


新領域創成のための
挑戦研究デュオ
Frontier Research in Duo (FRiD)

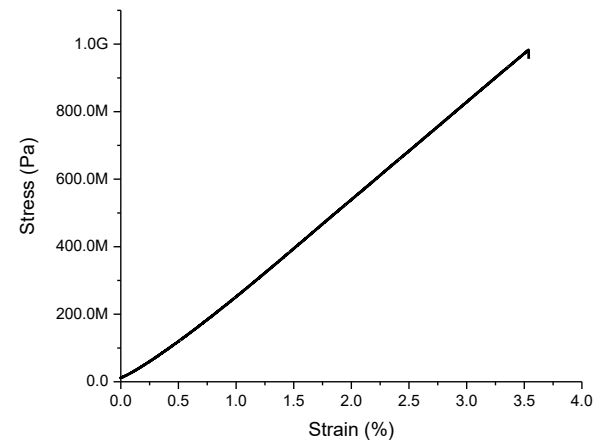
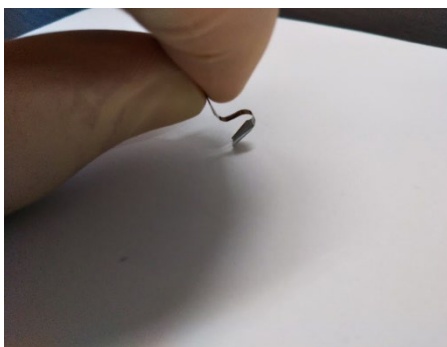
Multi-Sensory Flexible Skin

Topic for FY2021

Very high gauge factor force sensor

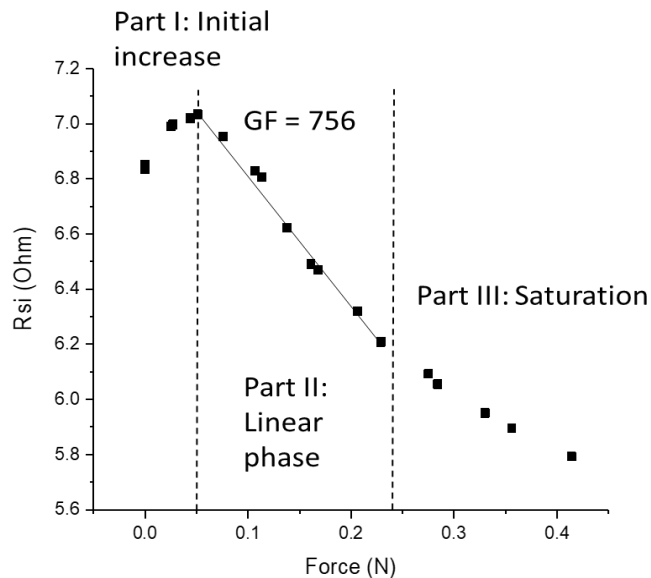
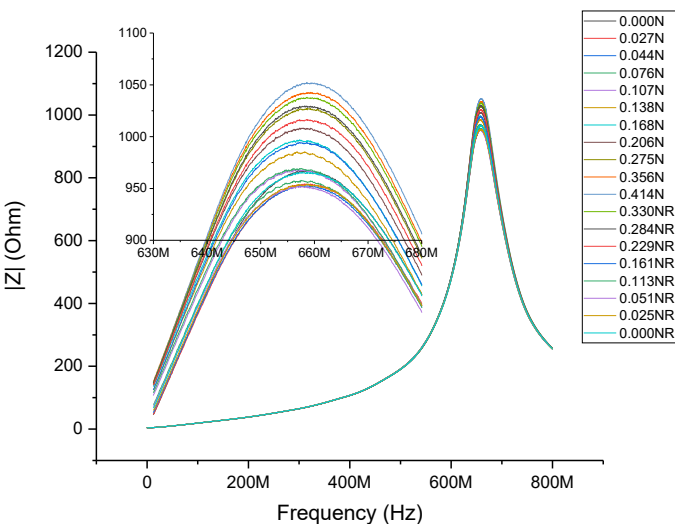


Very tough



Yield Strength: 983 MPa

3-times higher gauge factor than piezoresistive transducer





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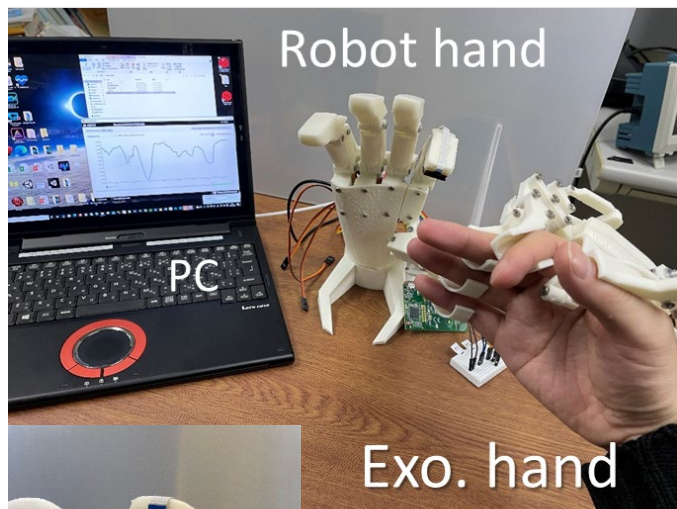


新領域創成のための
挑戦研究デュオ
Frontier Research in Duo (FRiD)

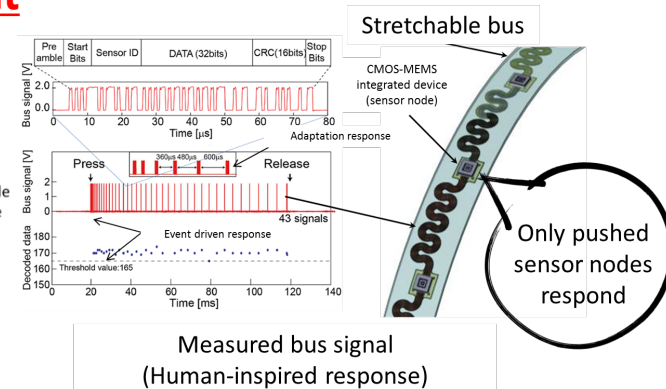
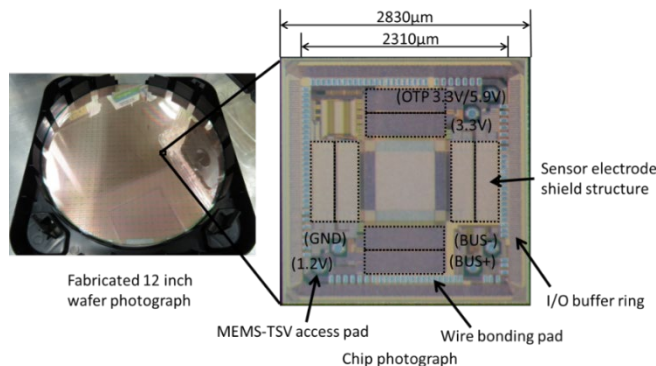
Multi-Sensory Flexible Skin

Topic for FY2021

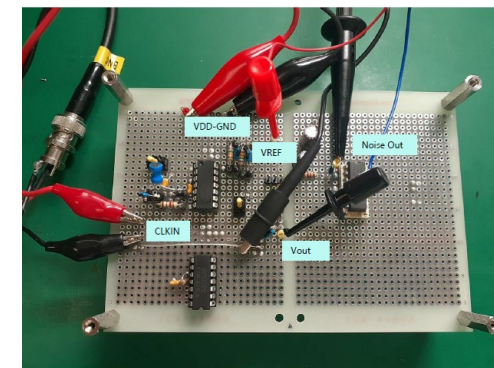
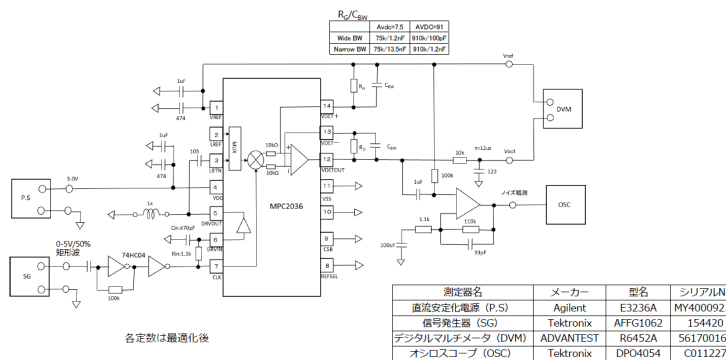
Robot hand demonstration and sensor readout circuit development



Human like robot hand demonstration with a developed form type tactile sensor and exoskeleton based controller



Sensor platform LSI including event-driven based response and serial bus communication



Inductance to voltage converter circuit for bridging a difference between our sensor platform LSI and developed sensor