

Supporting Information

3D printing of wearable sensors with strong stretchability for myoelectric rehabilitation

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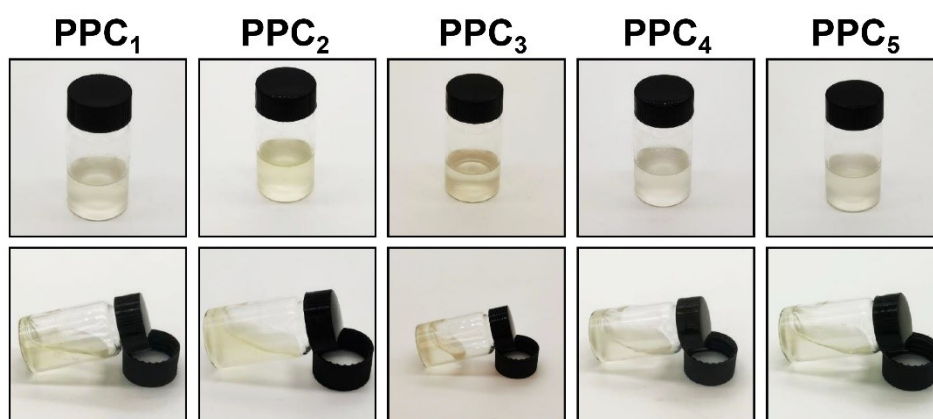


Figure S1. Synthesis of different hydrogels.

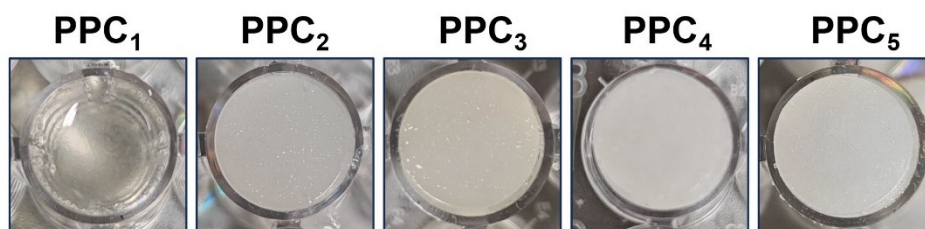


Figure S2. The state after crosslinking of different hydrogels.



Figure S3. PPC₁ is unable to crosslink by freeze-thaw.

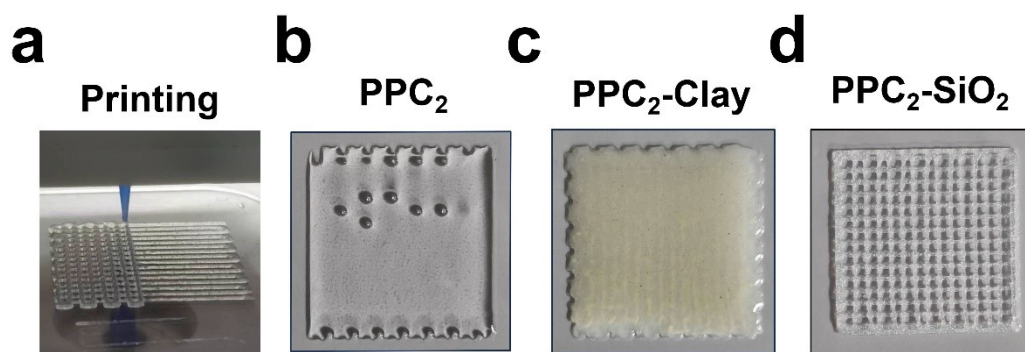


Figure S4. Printing conditions of PPC₂, PPC₂-Clay, PPC₂-SiO₂.

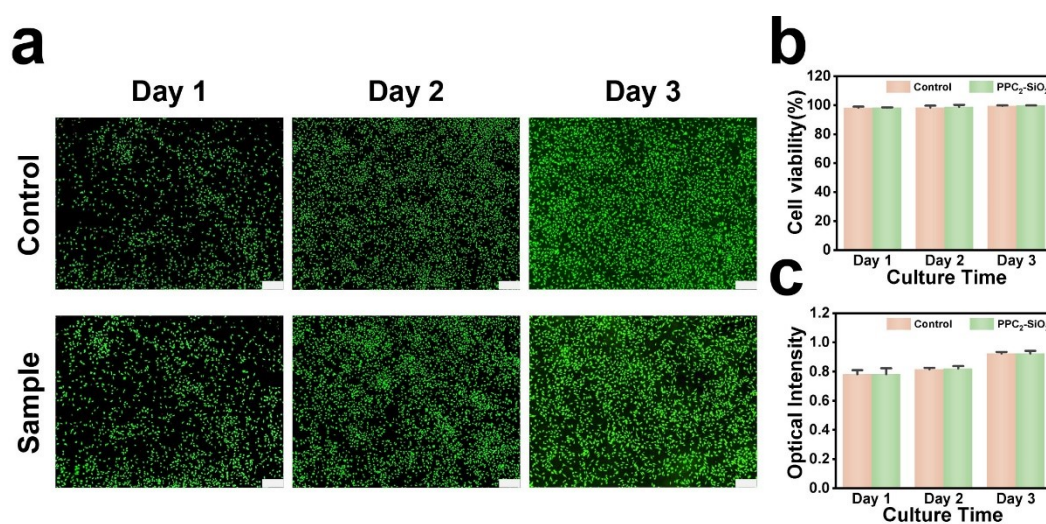


Figure S5. Biocompatibility. (a) Live/Dead cell staining result of the L929 co-culture with extracts. (c) the cell viability values on 1,2,3 days. (d) the alamarblue staining results. Scale bar:200 μ m.

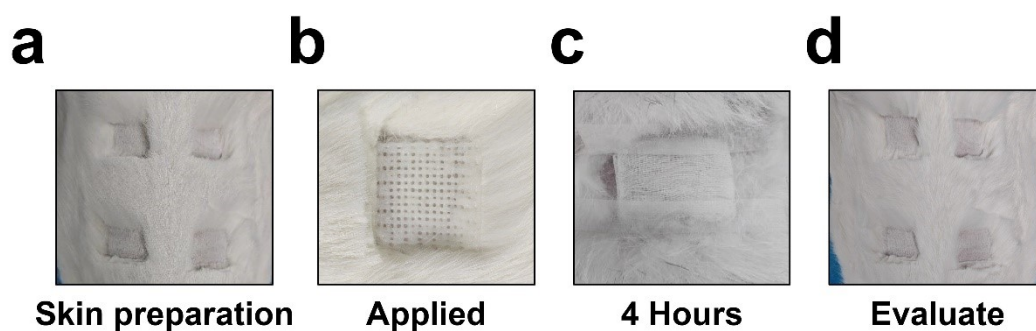


Figure S6. Skin irritation test. (a) Shave the sides of the rabbit's spine. (b) Hydrogel application. (c) Fixed patches for 4 hours. (d) The erythema and edema of the contact points were observed and recorded at 24h, 48h and 72h after contact with hydrogel.

Table S1. Irritation scores and descriptive ratings used in rabbits.

Descriptive Rating	PII	Descriptive Rating	PII
Non-irritating	0.0	Moderately Irritating	2.0-5.0
Slightly Irritating	0.1-1.9	Severely Irritating	5.1-8.0

Table S2. Observations for erythema and edema on individual rabbits.

Obs. Time after Treatment	Test Site	Erythema			Edema		
24 h	RA	0	0	0	0	0	0
24 h	RP	0	0	0	0	0	0
24 h	LA	0	0	0	0	0	0
24 h	LP	0	0	1	0	0	0
48 h	RA	0	0	0	0	0	0
48 h	RP	0	0	0	0	0	0
48 h	LA	0	0	0	0	0	0
48 h	LP	0	0	0	0	0	0
72 h	RA	0	0	0	0	0	0
72 h	RP	0	0	0	0	0	0
72 h	LA	0	0	0	0	0	0
72 h	LP	0	0	0	0	0	0

RA–Right Anterior; RP–Right Posterior; LA–Left Anterior; LP–Left Posterior. No erythema to edema occurred during the study period. No other irritation/effect was observed. As a result, the material has no toxic effect on the skin.