

## Electronic Supporting Information

### Title

Remote temperature-responsive parafilm dermal-patch for on demand topical drug delivery

### Authors

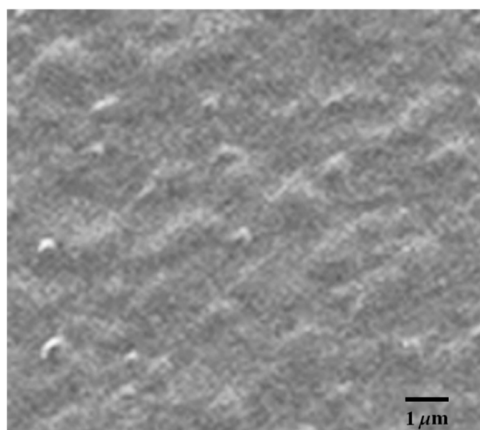
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### Affiliations

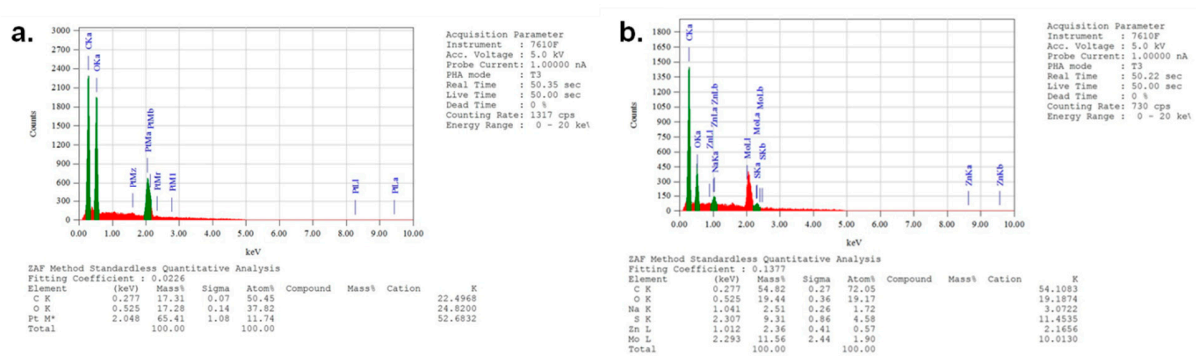
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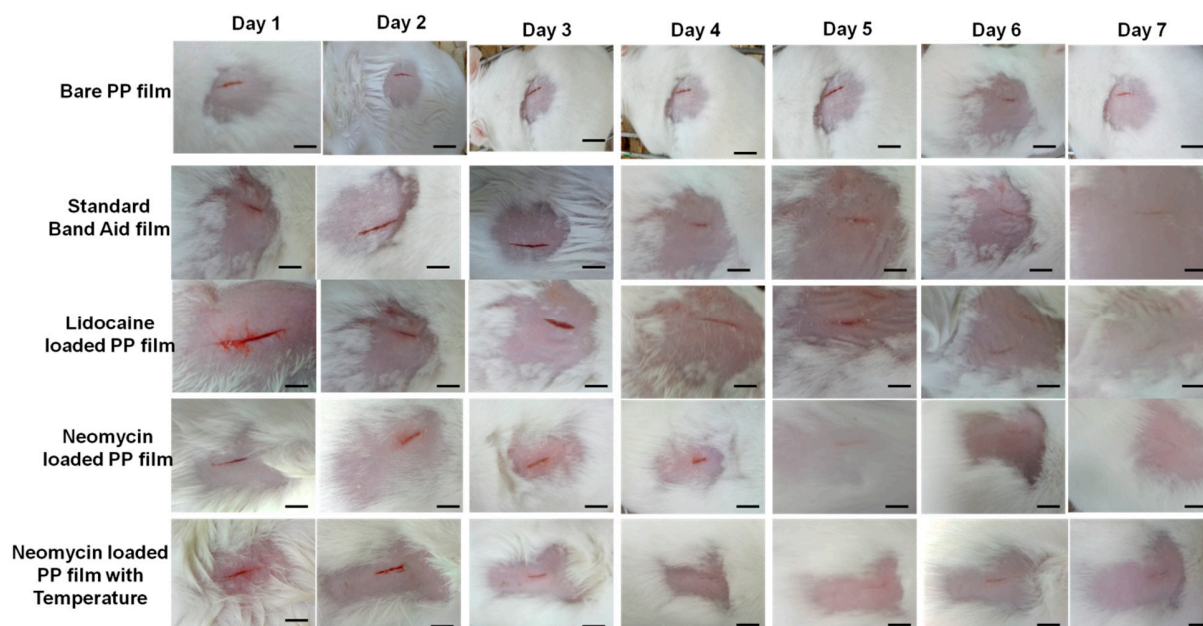
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**Figure S1.** The SEM images of PP film (control) treated with organic solvent (without drug) used for sample preparation (scale bar 1  $\mu$ m).



**Figure S2.** The EDX spectrum and composition ratio table of (a) bare unloaded PP film and (b) Dye (ICG) as a model drug loaded PP film.



**Figure S3.** The images of full-thickness incision on a mice skin immediately after closure with Bare PP film, Standard Band-Aid film, Lidocaine loaded PP film, Neomycin loaded PP film, and Neomycin loaded PP film with two minutes mini-heater treatments, respectively. The digital image shows recovery after day 1 to day 7 of different treatments group (scale bar 1 cm).