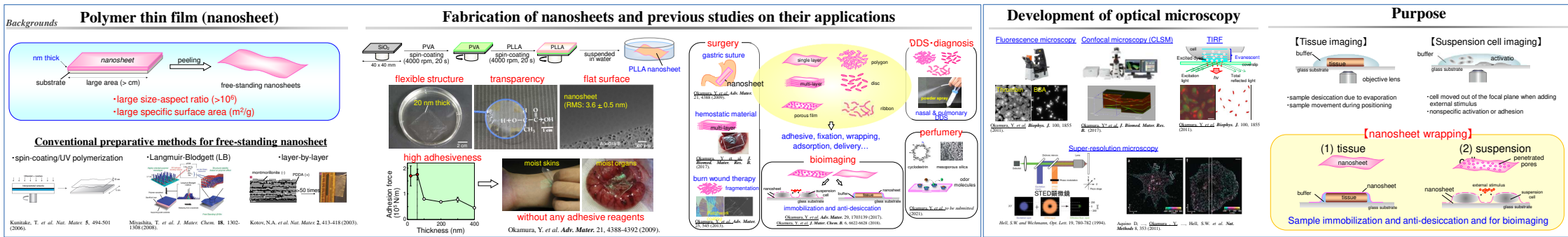


# Nanosheet Wrapping-Assisted Coverslip-Free Tissue Imaging for looking deeper

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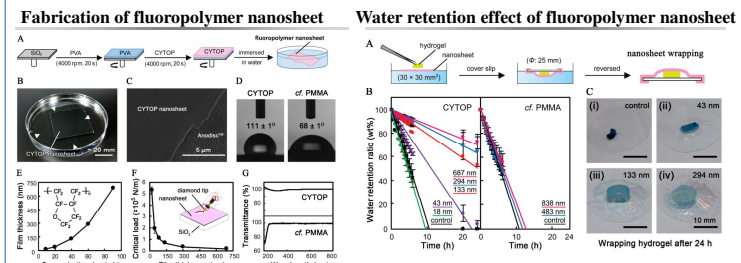
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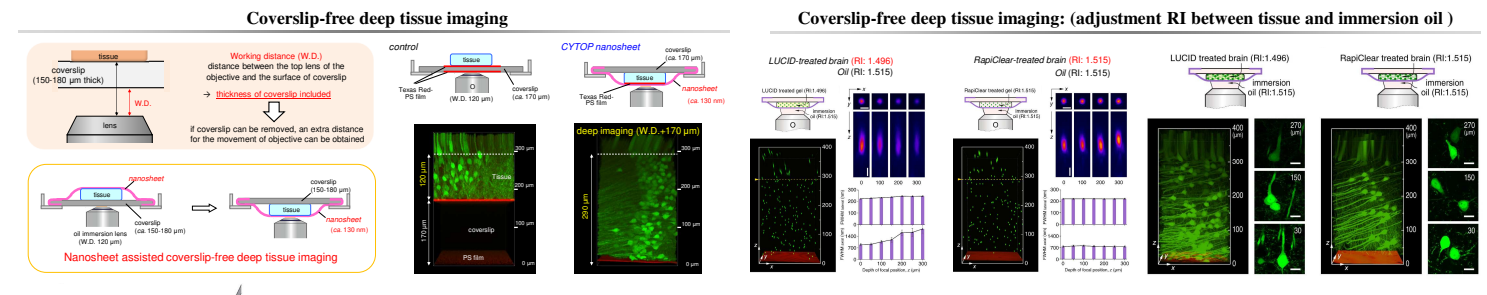
## Nanosheet wrapping preventing tissue desiccation & movement

In a conventional tissue imaging setup, the shrinkage of specimen for a long-time imaging is always inevitable due to evaporation. Moreover, sample desiccation can cause undesirable movements on microscopy stage, posing a serious problem for stable imaging. In this study, fluoropolymer nanosheet is prepared to wrap the specimen, and high resolution images while scanning over a large area for a long period of time is achieved.



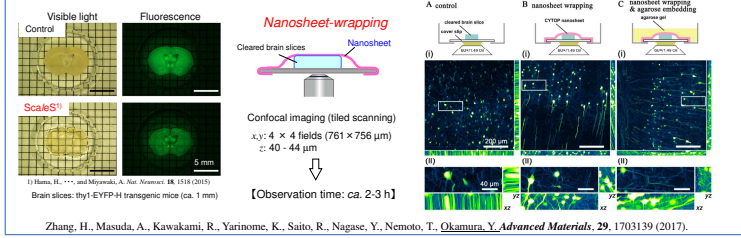
## Nanosheet wrapping-assisted coverslip-free deep tissue imaging

In a conventional tissue imaging setup, an objective lens is located under the tissue behind a glass coverslip, where the lens can only be moved until it is in contact with the coverslip, and the refractive index mismatch between specimen and glass causes a severe spherical aberration. In this study, hydrophobic nanosheet with thickness less than one-thousandth that of a coverslip is proposed to replace the coverslip for a deep imaging.



Zhang, H., Yarinome, K., Kawakami, R., Otomo, K., Nemoto, T., Okamura, Y. *PLoS One*, 15, e0227650 (2020).

## Nanosheet wrapping for high-quality imaging at tiled scanning



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