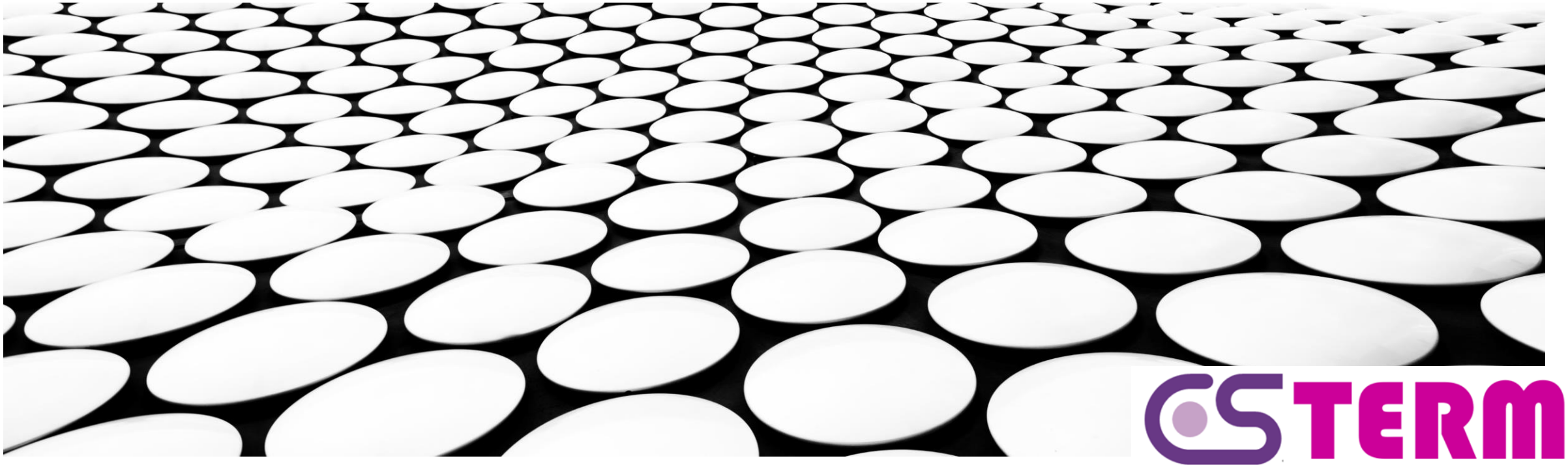
Introduction of Smart Cell Culture by SSCW®

SSCW: SMART SURFACE CULTURE WARE



CSTERM

Cell Sheet Tissue Engineering Regenerative Medicine Initiatives, Japan

SSCW ?

SSCW : Smart Surface Culture Ware

CSTERM is proud to announce a successful development of SSCW®, a highly functional and low-cost thermo-responsive smart surface culture ware Under the collaboration with Hosokawa Yoko Co., Ltd. and TWINS, Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University.

SSCW ?

SSCW : Smart Surface Culture Ware

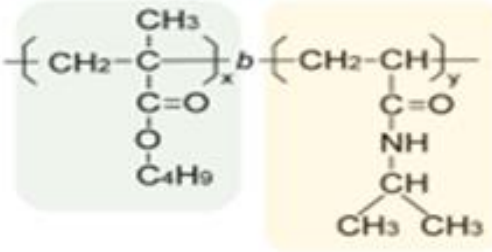
SSCW® is developed by innovative polymer nano-coating technologies to culture and harvest various types of cells without any damage, by just switching temperature of the culture wares

Switching surface by nano-level control of polymer coating

Smart Polymer Designing for SSCW

PBMA → Poly(butyl methacrylate)

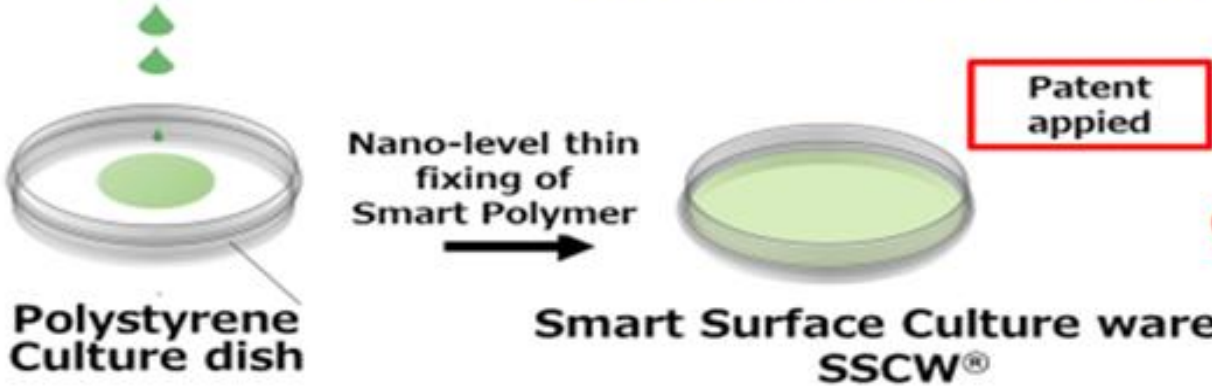
For stable Polymer Anchoring



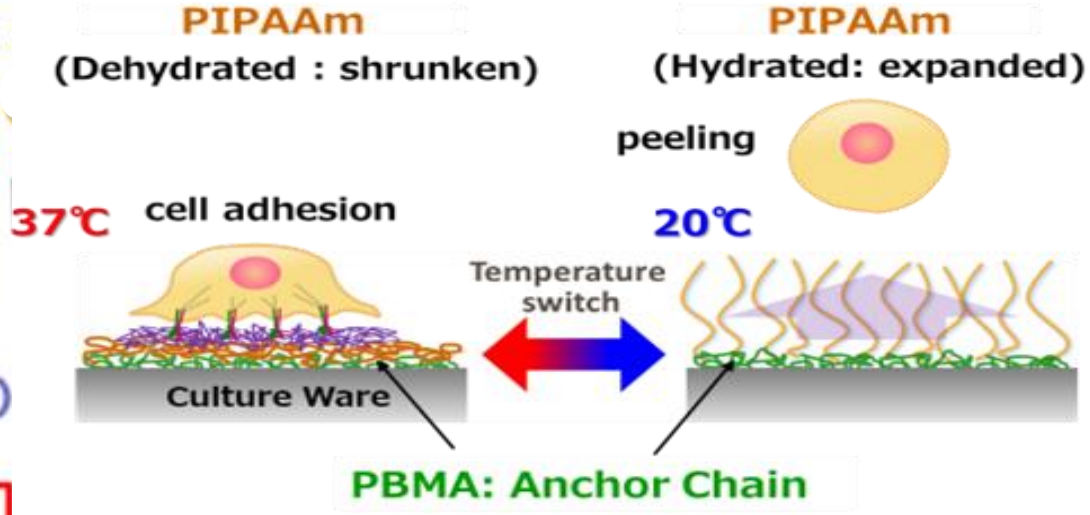
← **PIPAAm** Poly(*N*-isopropyl acrylamide)

For cell Adhesion Control by Thermo-Switching

Smart Polymer Solution (no usage of monomer)



Smart surface of SSCW®



CSTERM will offer tailer-made thermo-responsive SSCW® to fit to various type of cells

Smart Surface Culture Wares（SSCW®）

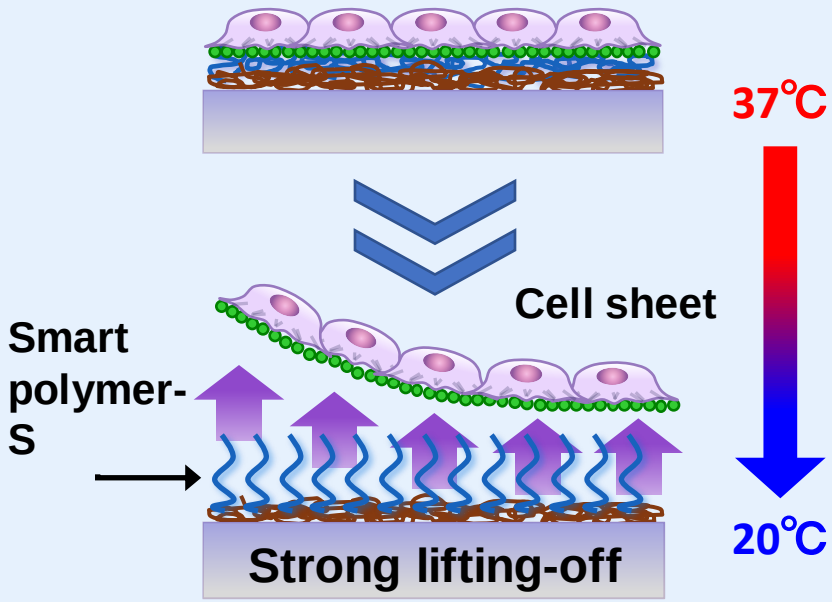
CSTERM × HOSOKAWA YOKO × TWMU

Patents applied
By CSTERM

Basic Patent licensed from Tokyo Women's Medical University

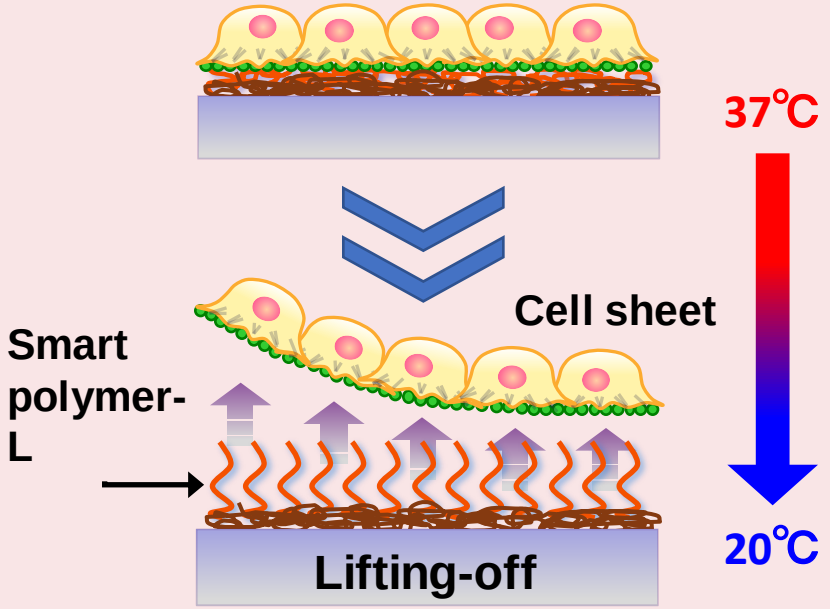
SSCW-S

Standard Adhesive cells



SSCW-L

For Weaker adhesive cells



Unique polymer nanocoating technology produces "on-demand surface customization" for various type of cells.

Smart Surface Culture Ware SSCW® Samples

SSCW® sample offering

SSCW® Sample type	Order Code	Box <Content>	Price (tax excl.)
SSCW-S	S-SSCWS	SSCW®- S <18 dishes>	¥ 9,000
SSCW-L (Higher Adhesive)	S-SSCWL	SSCW®- L <18 dishes>	¥ 9,000
SSCW-Mix (trial set)	S-SSCWM	SSCW®- Mix < S&L - 12 dishes each>	¥ 12,000
SSCW-OX (semi-order type)	S-SSCWOX	SSCW®-OX <18 dishes>	¥ 12,000

:Sterilized packaging by 6 dishes

Please visit our Home Page to submit your order to CSTERM
https://www.csterm.com/SSCW_Intro_ENG.html.

Amazon Business site for international users

SSCW started to collaborate with JLSS to offer SSCW for international users soon

Scientific papers related to SSCW® and its polymer technology

- **Realization of Thermo-responsiveness**

  N. Yamada, T. Okano et al., Makromol. Chem., Rapid Com.1990; 11:571-576.
  T. Okano et al., Biomed. Mater. Res. 1993; 27:1243-1251.
  T. Okano et. al., Biomaterials 1995; 16:297-303.

- **Nano-coating technology of thermos-responsive polymer**

  M. Nakayama, T. Okano et al., Macromol. Biosci. 2012: 12: 751-760.
  M. Nakayama, T. Okano et al., J. Mater. Chem. B 2020; 8: 7812-7821.
  M. Nakayama, T. Okano et al., Macromol. Biosci. 2021; 21:2000330.

- **Cell sheet application by using SSCW®**

  Y. Tobe, et al., Microvascular Research 2022; 141: 104321.

  https://www.sciencedirect.com/science/article/pii/S002628622000115

  Perfusable vascular tree-like construction in 3D cell-dense tissues using artificial vascular bed