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### Supporting information

## Developing environmentally friendly fishing nets by integrating halogenated marine terpene with hydrogel polymers

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**Figure S1.** (A) Living specimens of *L. okamurae* collected from Omaezaki, Shizuoka Prefecture. (B) Upper portion of a branch. (C) A single *corps en cerise* per superficial cortical cell.



Figure S2. GPC spectra of poly(MAAc).



Figure S3. FT-IR spectra of PVA/poly(MAAc)-fishing nets after immersion to a large amount of water.

# Loading and release tests of methylene blue form PVA/poly(MAAc)-fishing nets

Each plain fishing net (69-72 mg) and PVA/poly(MAAc)-fishing net (63-70 mg) were immersed in 5 mL of methylene blue aqueous solution for 2 h (1 mg/mL, number of experiments = 3, 25°C). After the immersion, all fishing nets were washed using a large amount of water and were immersed into 10 mL of HCl aqueous solution at pH 3 for 24 h. Each 150  $\mu$ L of aqueous solution were measured using a microplate reader (Infinite M1000-SSY, Tecan Japan, Kanagawa, Japan) at wavelength of 664 nm. The calibration curve for methylene blue was plotted using the HCl aqueous solution at pH 3.



**Figure S4.** Amounts of loaded methylene bule in fishing nets with different thickness of PVA/poly(MAAc) layers.



**Figure S5.** Residual weights of (A) laurinterol, (B) PVA/poly(MAAc) film, (C) PVA/poly(MAAc)-fishing nets, and (D) PVA/poly(MAAc)-laurinterol-fishing net (laurinterol concentration: 1 mg/mL).



**Figure S6.** DSC curve of (A) PVA/poly(MAAc) film, (B) fishing nets, and (C) PVA/poly(MAAc)-fishing net.