Photo-induced molecular-recognition-mediated adhesion of giant vesicles

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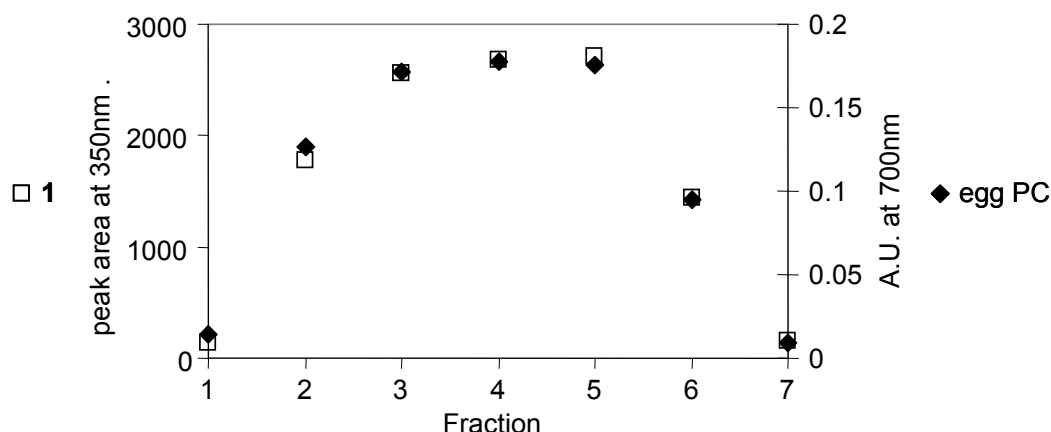
Gel Filtration

Fig. S1 Elution profiles of egg PC and **1a** upon gel filtration.
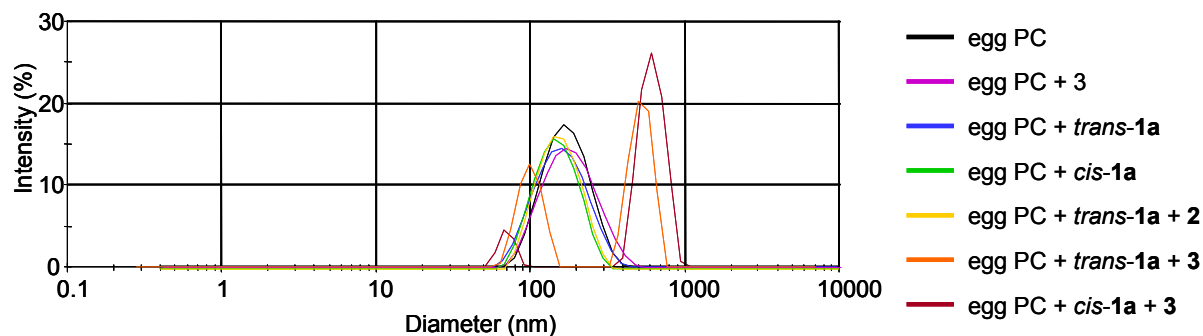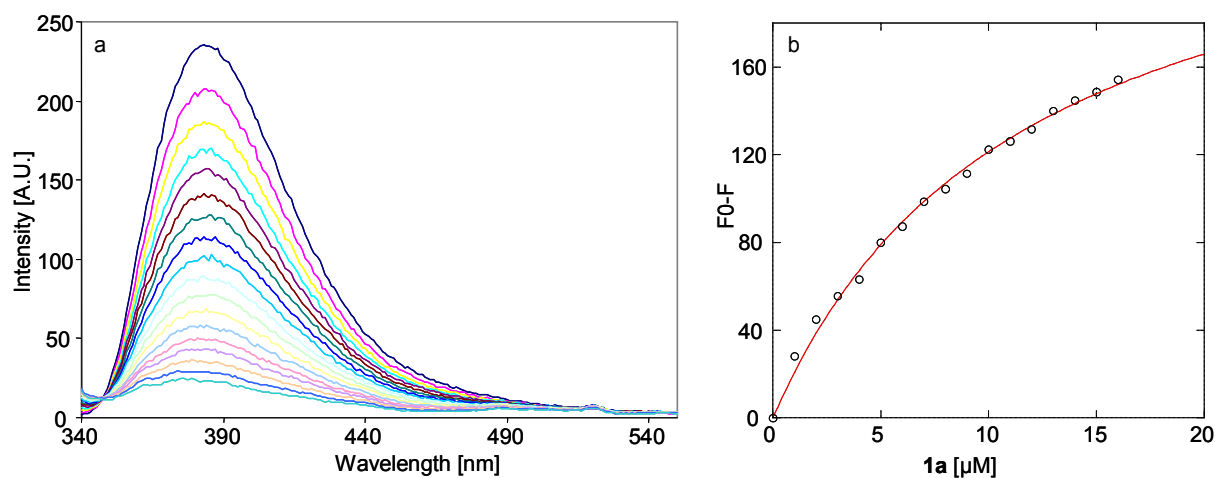
Dynamic light scattering

Fig. S2 Dynamic light scattering traces of 5 mM egg PC vesicles with and without 5 mol% *cis*- or *trans*-**1a** before and after addition of guests **2** or **3**.
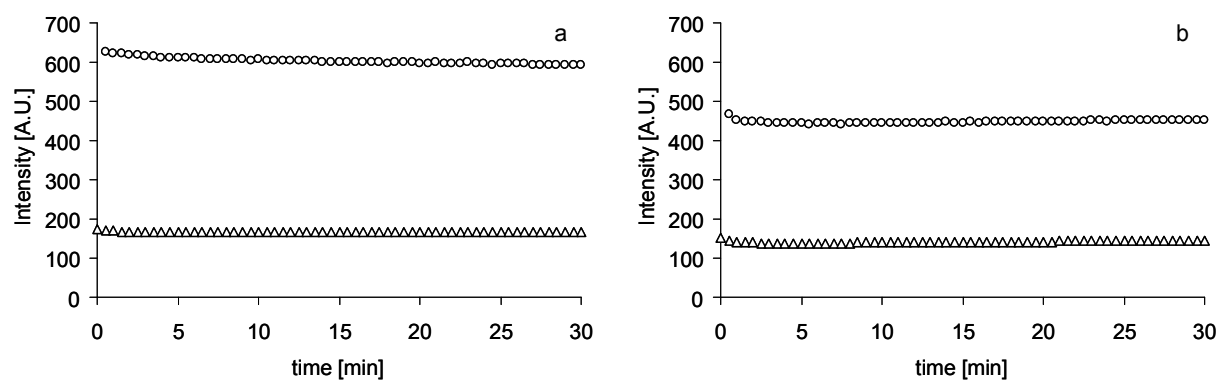
Fluorescence titration

Fig. S3 Fluorescence titration for determining the apparent binding constant of *cis*-**1a** to **3**. (a) Quenching of isoquinolinium fluorescence upon addition of egg PC vesicles containing 5 mol% *cis*-**1a** to a 50μM solution of polymeric guest **3**. (b) Fit of the data using a naive 1:1 binding model.
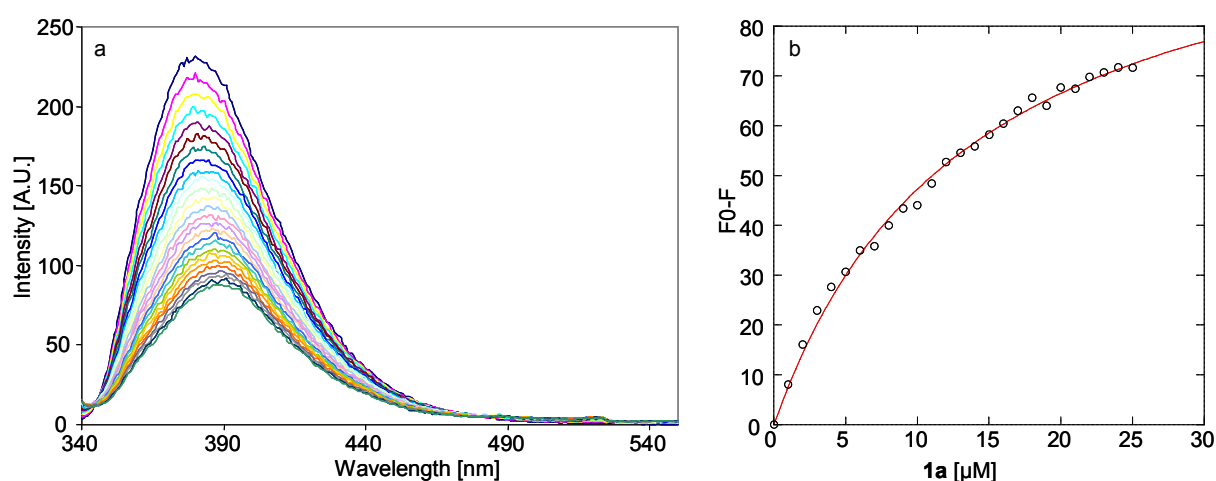
Fig. S4 Fluorescence titration for determining the apparent binding constant of *trans*-**1a** to **2**. (a) Quenching of isoquinolinium fluorescence upon addition of egg PC vesicles containing 5 mol% *trans*-**1a** to a 2 μM solution of monovalent guest **2**. (b) Fit of the data using a 1:1 binding model.

Fusion Assay

Fig. S5 Fusion assay for LUVs containing 5 mol% **1a** in (a) the *trans*- and (b) the *cis*-conformation after addition of polyvalent guest **3**. Fluorescence emission intensities of NBD (at 530nm, triangles) and Rh (at 590nm, circles) were followed upon excitation at 470nm. The addition of **3** had no influence on fluorescence intensity.

NMR spectra and HPLC analysis of 1a

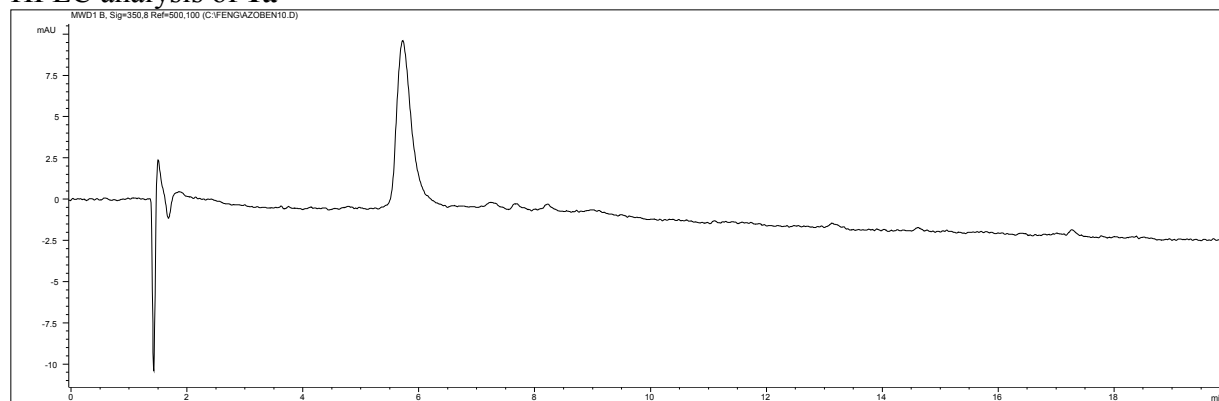^{1}H-NMR of **1a**
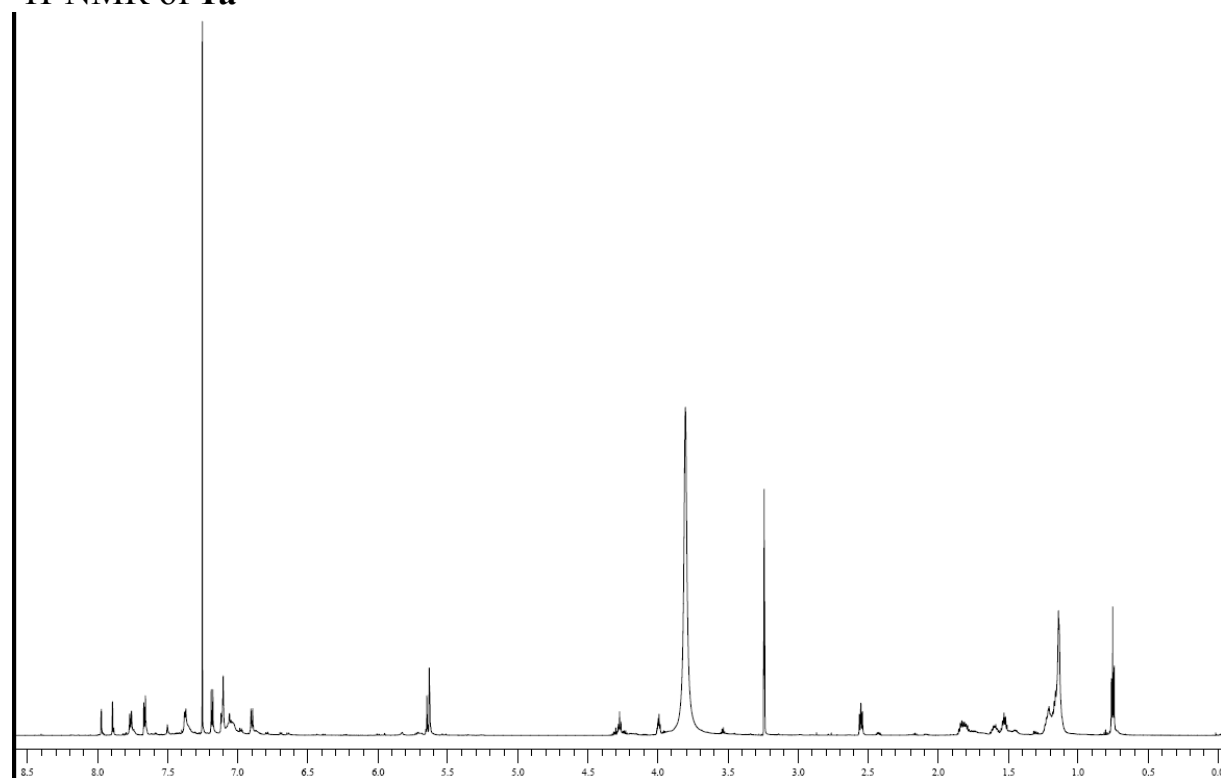
^{13}C-NMR of **1a**
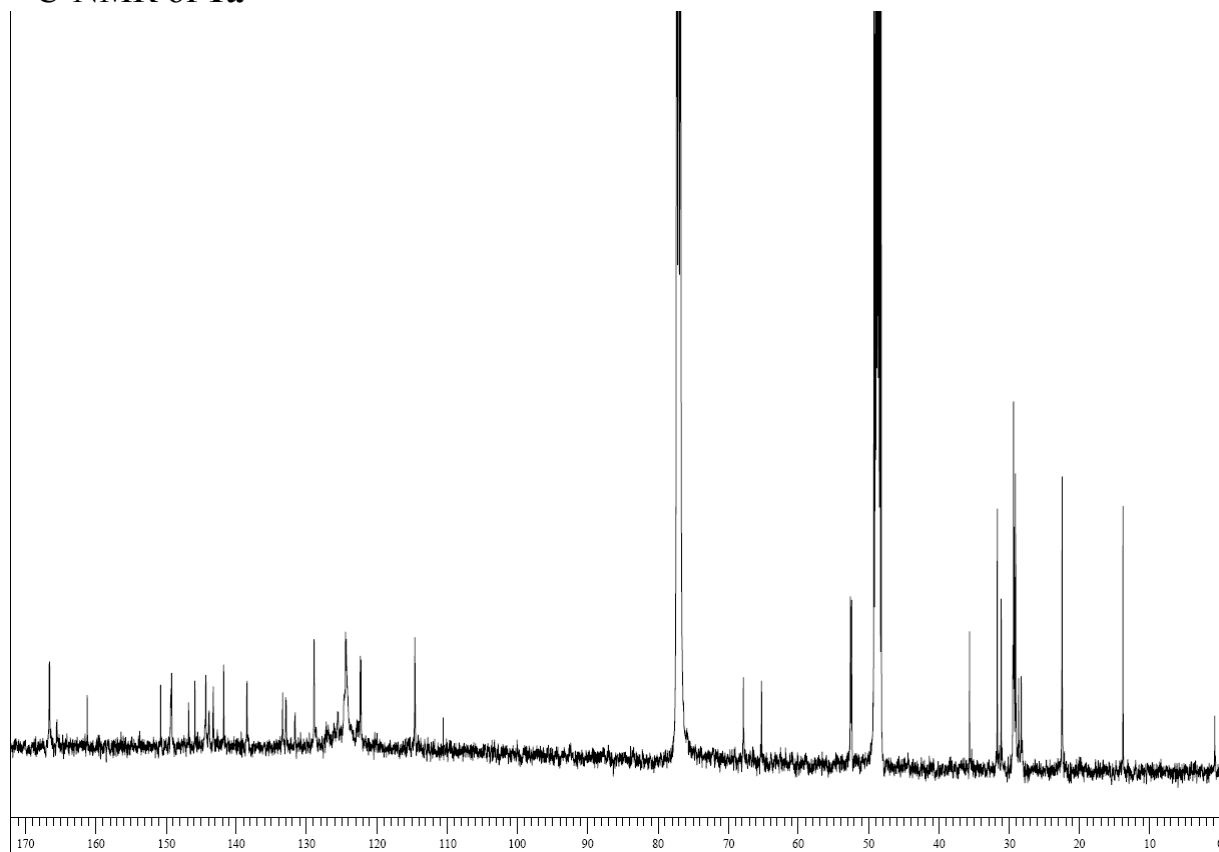
HPLC analysis of **1a**

Conditions. Column: Eclipse XDB C8 150×4.6mm; Solvent A: water (0.1% formic acid), Solvent B:THF; gradient 0-20min 40-100% B; flow rate: 1 mL / min; λ 350 nm; ambient temperature