

Supporting Information

**Induced Salt-Responsive Circularly Polarized Luminescence of
Hybrid Assemblies Based on Achiral Eu-Containing
Polyoxometalates**

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Experimental Section

Materials

Quinine ((*R*)-(6-Methoxyquinolin-4-yl)[(1*S*,2*S*,4*S*,5*R*)-5-vinylquinuclidin-2-yl]methanol), Quinidine ((*S*)-(6-Methoxyquinolin-4-yl)[(1*S*,2*R*,4*S*,5*R*)-5-vinylquinuclidin-2-yl]methanol), (*R*)-1-phenylethanol, 2-(Dimethylamino)ethyl methacrylate (DMAEMA), and methacryloyl chloride were purchased from J & K Chemical. DMAEMA was distilled under reduced pressure and kept under -20 °C. Methacryloyl chloride was distilled just prior to use. (*R*)-1-(pyridin-4-yl)ethanol was obtained from Sigma Aldrich without further purification. *N,N,N',N'',N''*-pentamethyldiethylenetriamine (PMDETA) was purchased from Tokyo Chemical Industry Co. and used as received. Copper(I) bromide (CuBr) was stirred in glacial acetic acid for at least 5 h, then filtered, washed with acetic acid, ethanol, acetone, and ethyl ether, successively, and finally dried under vacuum before use. Dichloromethane (DCM) and triethylamine (TEA) were distilled after being dried over CaH₂. Tetrahydrofuran (THF) was distilled over sodium/benzophenone under N₂ protection. Ultrapure water from a Millipore Milli-Q system was used to prepare all aqueous solutions. Na₉EuW₁₀O₃₆ and K₁₃[Eu(SiW₁₁O₃₉)₂] was synthesized according to previous reports^{51,52}. Unless otherwise noted, the other chemicals were purchased from Sinopharm Chemical Reagent Co. Ltd and used as received.

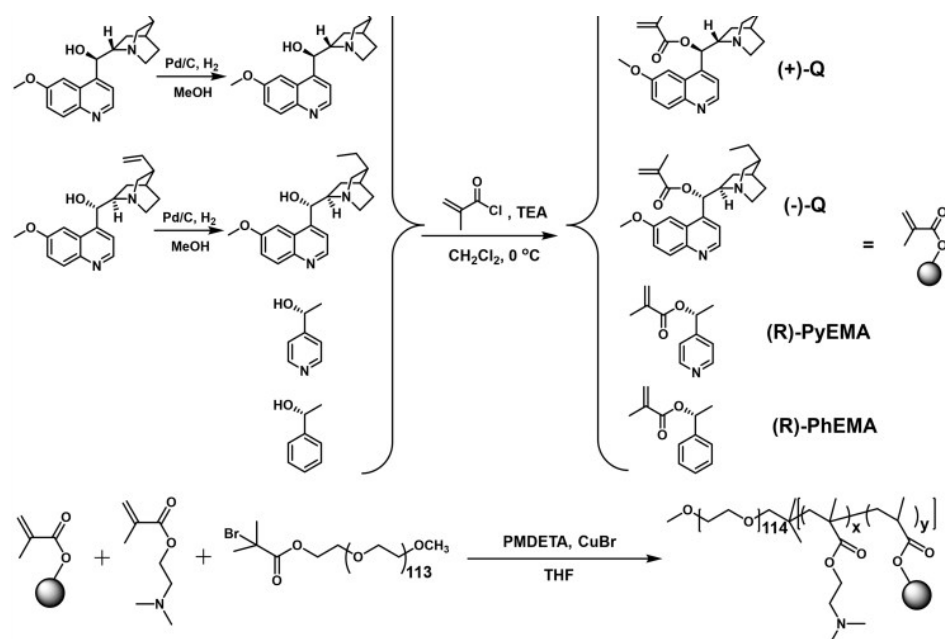
Measurements

¹H NMR (400 MHz) and ¹³C NMR (100 MHz) were recorded on a Bruker Avance III spectrometer at room temperature in CDCl₃ solution. High-resolution mass spectra were obtained by the ESI ionization technique using a quadrupole analyzer. A gel permeation chromatography (GPC) apparatus, equipped with a Waters 2414 refractive-index detector, a Waters 1525 binary HPLC pump, and three Waters Styragel columns (HR1, HR2, and HR3) was used to determine the molecular weight and the molecular weight distribution of polymers at 45 °C with DMF as eluent (1.0 ml/min). UV-Vis absorption spectra measurements were conducted on a Lambda 35 UV-Vis spectrometer. An FLS920 Steady State & Time-resolved Fluorescence Spectrometer (Edinburgh Instruments Ltd.) was used to measure the photoluminescence intensity of the solution and the lifetimes of EuW₁₀. The photoluminescence decays of the organic parts were obtained from Lifespec-Red Picosecond Lifetime Spectrometer. A J-810 circular dichroism spectrometer (Jasco Corporation, Japan) was involved to achieve the circular dichroism spectra. The molar ellipticity and molar absorptivity were calculated only in consideration of the concentrations of Q units. Circularly polarized luminescence (CPL) spectra were acquired from a commercial instrument DSM 17 spectrometer (Olis Co.) which combined the Olis DM 245 fluorescence spectrometer, the Olis DSM 17 CD spectropolarimeter, and the Olis Polarization Toolbox together. The value of the luminescence dissymmetry factor, g_{CPL} , which defined as

$$g_{CPL} = \frac{2(I_L - I_R)}{I_L + I_R}$$

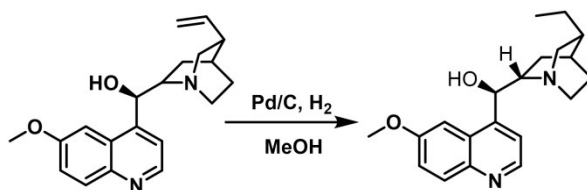
where I_L and I_R refer to the intensity of left and right circularly polarized light, respectively, could be directly obtained from the measurements. Without otherwise noted, all samples were excited at 350 nm. FT-IR spectra were measured on a Bruker Vector22 spectrometer. A JEM-2100 (JEOL, Japan) transmission electron microscopy operated at 200 KV was used to obtain the TEM images. All the samples were prepared by dripping a drop of solution onto copper grids coated with amorphous membranes and then drying in air. Small-angle X-ray scattering (SAXS) measurements of (+)-PEO₁₁₄-*b*-P(D_{*x*}Q_{*y*})/EuW₁₀ series and the (+)-PEO₁₁₄-*b*-P(D₂₀Q₁₁)/EuW₁₀ mixture under different concentrations of NaCl were performed at beamline 1W2A of Beijing Synchrotron Radiation Facility (BSRF). The beamline was introduced from a 14-pole wiggler and monochromatized by a silicon monochromator resulting in a fixed wavelength of $\lambda = 1.54 \text{ \AA}$. The beam is focused on the detector 30 meter away from the source. The samples were injected in a prepared cell with two parallel X-ray windows of laminated mica. The exposure time of each sample is 60 s. The sample-to-detector distance is fixed 1555 mm, covering a scattering vector (q) range of 0.1 – 2.1 nm⁻¹. The results were fitted by software Fit2D.exe and S.exe^{53,54}.

Synthesis Procedures



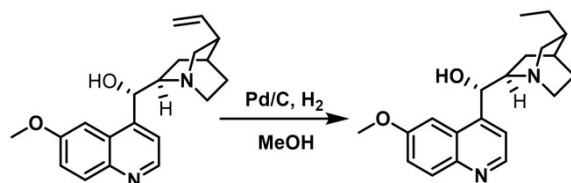
Scheme S1. Synthesis strategy of monomers and polymers.

Synthesis of (R)-[(1S,2S,4S,5R)-5-ethylquinuclidin-2-yl](6-methoxyquinolin-4-yl) methanol (hydroquinine)



The hydrogenation of quinine was conducted according to previous work⁵⁵. 500 mg of Pd/C catalyst (Pd% = 5% - 10%) was added into a 100 ml of methanol solution containing 4.00 g of quinine. After three times of degassing and purging hydrogen, the reaction was initiated under hydrogen atmosphere and continued for 3 h. By filtrating and concentrating the solution under vacuum, we obtain white powder as the product (3.99 g, 99%). ¹H NMR (CDCl₃, 400 MHz): δ 0.83 (t, J = 7.27 Hz, 3H), 1.28 (m, 2H), 1.43 (m, 2H), 1.55 (m, 1H), 1.70 (m, 2H), 1.79 (br, 1H), 2.41 (m, 1H), 2.67 (m, 1H), 3.02 – 3.22 (m, 2H), 3.41 (m, 1H), 3.92 (s, 3H), 5.56 (s, 1H), 7.27 (s, 1H), 7.35 (dd, J_1 = 9.17 Hz, J_2 = 2.72 Hz, 1H), 7.52 (d, J = 4.78 Hz, 1H), 8.01 (d, J = 9.17 Hz, 1H), 8.73 (d, J = 4.78 Hz, 1H).

Synthesis of (S)-[(1S,2R,4S,5R)-5-ethylquinuclidin-2-yl](6-methoxyquinolin-4-yl) methanol (hydroquinidine)



The preparation of hydroquinidine was similar to that of its diastereoisomer, hydroquinine, with a yield of 99%. The product is white powder. ¹H NMR (CDCl₃, 400 MHz): δ 0.87 (t, J = 7.27 Hz, 3H), 1.24 (m, 2H), 1.41 (m, 2H), 1.52 (m, 2H), 1.71 (br, 1H), 1.93 (m, 1H), 2.77 (m, 1H), 2.88 – 3.04 (m, 3H), 3.10 (m, 1H), 3.88 (s, 3H), 5.61 (s, 1H), 7.22 (d, J = 2.80 Hz, 1H), 7.34 (dd, J_1 = 9.17 Hz, J_2 = 2.80 Hz, 1H), 7.55 (d, J = 4.47 Hz, 1H), 8.00 (d, J = 9.17 Hz, 1H), 8.72 (d, J = 4.47 Hz, 1H).

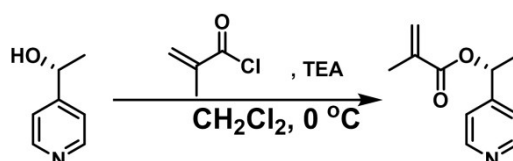
Synthesis of (R)-[(1S,2S,4S,5R)-5-ethylquinuclidin-2-yl](6-methoxyquinolin-4-yl) methyl methacrylate ((+)-Q)

Methacryloyl chloride (1.38 g, 13.20 mmol) in anhydrous CH₂Cl₂ was added dropwise into the anhydrous CH₂Cl₂ (40 ml) solution of hydroquinine (3.99 g, 12.24 mmol) and TEA (2.50 ml, 18.00 mmol) at 0 °C under nitrogen atmosphere and stirred for 6h at room temperature. After the reaction was terminated by water, the mixture was washed with 2 N NaHCO₃. The pink organic layer was collected, dried over anhydrous Na₂SO₄, and concentrated under vacuum. Silica gel column purification with MeOH/EtOAc (1/6, v/v) gave the product as white powder (3.90 g, 87%). ¹H NMR (CDCl₃, 400 MHz): δ 0.85 (t, *J* = 7.27 Hz, 3H), 1.31 (m, 2H), 1.47 (m, 2H), 1.59 (m, 1H), 1.75 (m, 2H), 1.83 (br, 1H), 1.98 (t, *J* = 1.15 Hz, 3H), 2.35 (m, 1H), 2.68 (m, 1H), 3.06 (m, 1H), 3.17 (m, 1H), 3.38 (m, 1H), 3.97 (s, 3H), 5.66 (t, *J* = 1.53 Hz, 1H), 6.23 (t, *J* = 1.15 Hz, 1H), 6.55 (d, *J* = 5.92 Hz, 1H), 7.34 (s, *J* = 4.55 Hz, 1H), 7.37 (dd, *J*₁ = 9.10 Hz, *J*₂ = 2.67 Hz, 1H), 7.45 (d, *J* = 2.67 Hz, 1H), 8.01 (d, *J* = 9.10 Hz, 1H), 8.73 (d, *J* = 4.55 Hz, 1H). ¹³C NMR (CDCl₃, 100 MHz): δ 12.0, 18.4, 23.5, 25.3, 27.7, 28.3, 37.3, 42.6, 55.8, 58.3, 59.1, 74.2, 101.4, 118.4, 122.0, 126.3, 126.8, 131.8, 136.2, 143.7, 144.8, 147.4, 158.1, 166.1. HRMS: calcd for C₂₄H₃₁N₂O₃ (MH⁺) 395.2329, found 395.2331.

Synthesis of (S)-[(1S,2R,4S,5R)-5-ethylquinuclidin-2-yl](6-methoxyquinolin-4-yl) methyl methacrylate ((-)-Q)

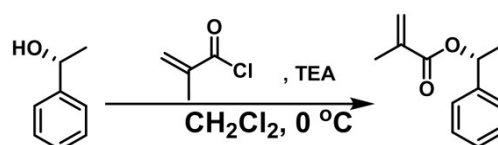
The preparation procedure was similar to that of (+)-Q. The white powder product (-)-Q was obtained with a yield of 80%. ¹H NMR (CDCl₃, 400 MHz): δ 0.91 (t, *J* = 7.13 Hz, 3H), 1.35 – 1.65 (m, 6H), 1.69 – 1.87 (m, 2H), 1.98 (s, 3H), 2.60 – 2.84 (m, 3H), 2.92 (m, 1H), 3.32 (m, 1H), 3.96 (s, 3H), 5.65 (s, 1H), 6.22 (s, 1H), 6.55 (d, *J* = 6.64 Hz, 1H), 7.34 (d, *J* = 4.55 Hz, 1H), 7.37 (dd, *J*₁ = 9.27 Hz, *J*₂ = 2.72 Hz, 1H), 7.43 (d, *J* = 2.72 Hz, 1H), 8.01 (d, *J* = 9.27 Hz, 1H), 8.73 (d, *J* = 4.55 Hz, 1H). ¹³C NMR (CDCl₃, 100 MHz): δ 12.2, 18.4, 23.9, 25.3, 27.8, 28.6, 37.4, 42.7, 55.7, 58.5, 59.2, 74.6, 101.4, 118.7, 121.9, 126.3, 126.9, 131.9, 136.2, 143.7, 144.9, 147.5, 158.0, 166.4. HRMS: calcd for C₂₀H₂₇N₂O₂ (MH⁺) 395.2329, found 395.2331.

Synthesis of (R)-1-(pyridin-4-yl)ethyl methacrylate (denoted as (R)-PyEMA)



The chiral monomer (R)-PyEMA was synthesized by reacting (R)-1-(pyridin-4-yl)ethanol with methacryloyl chloride, parallel to the preparation of (+)-Q. By silica gel purification with PE/EtOAc (2/1, v/v) as eluent, we attained the colorless oil product (0.564 g, 73%). ¹H NMR (CDCl₃, 400 MHz): δ 1.57 (d, *J* = 6.72 Hz, 3H), 1.98 (s, 3H), 5.64 (s, 1H), 5.90 (q, *J* = 6.72 Hz, 1H), 6.20 (s, 1H), 7.26 (d, *J* = 5.86 Hz, 2H), 8.59 (d, *J*₁ = 5.86 Hz, 2H).

Synthesis of (R)-1-phenylethyl methacrylate (denoted as (R)-PhEMA)



The preparation of (R)-PhEMA resembled that of (R)-PyEMA. After being washed successively with 0.2 N HCl, 0.2 N NaHCO₃, and brine, the organic layer was collected and dried over anhydrous Na₂SO₄ and concentrated under vacuum. Then the silica gel using DCM/PE (1/2, v/v) as eluent gave the colorless oil product (4.22g, 97%). ¹H NMR

(CDCl₃, 400 MHz): δ 1.57 (d, $J = 6.56$ Hz, 3H), 1.96 (s, 3H), 5.57 (s, 1H), 5.94 (q, $J = 6.56$ Hz, 1H), 6.16 (s, 1H), 7.24 – 7.40 (m, 5H).

Synthesis of the diblock polymers

All of the polymers involved in this work were prepared through atom transfer radical polymerization (ATRP) initiated by the macroinitiator CH₃O-PEO₁₁₄-Br ($M_n \approx 5000$ g mol⁻¹) which has been synthesized in our previous work. Generally speaking, into a glass tube with a magnetic stir were introduced the macroinitiator, copper (I) bromide, and PMDETA with a molar ratio of 1/1.2/1.5, specific contents of different monomers, and dry THF. After the mixture was degassed by three freeze-vacuum-thaw cycles, the tube was sealed before the initiation of the polymerization at 50 °C. Several hours later, the reaction was quenched by cooling in liquid nitrogen, and then the mixture was diluted with THF and precipitated in petroleum ether/ethyl ether (2/1, v/v). The copper catalyst was removed by dissolving the precipitation into CH₂Cl₂ and washing with basic EDTA solution twice. The organic layer was collected, dried over Na₂SO₄, concentrated under reduced pressure, dissolved in 10 ml THF, and precipitated in petroleum ether/ethyl ether (2/1, v/v). The block polymers were obtained as a white powder after being dried under vacuum. The molecular weight distributions of polymers were determined by gel permeation chromatography with polystyrene standard and the number-average molecular weight of polymers were calculated from ¹H NMR results.

Preparation of assembly solutions

All the solutions used in this work were prepared as follows: aqueous solutions of polymers and solutions of polyoxometalates were mixed together under vigorous stirring at a charge stoichiometric point. At this time, the concentration of positive charges equals that of negative charges. For (+)-Q- or (-)-Q-containing solution, the pH was adjusted to 4.11 by HCl, making sure that the amino group of DMAEMA was completely protonated and each Q group contained 1.5 positive charges on average. While for solutions containing polymers with pyridinyl and phenyl group, the pH was 5.19. The solution stood 12h-before any measurements or further treatment. For spectroscopic tests, the polymer concentration in each solution is around 0.15 mg/ml. The samples for IR measurements were prepared by freeze-drying the solutions for spectroscopic characterization and then mixing with KBr. In TEM and SAXS measurements, the polymer concentrations were adjusted to 2.00 mg/ml.

Supplementary Figures and Tables

Table S1. Characterizations of diblock copolymers synthesized by ATRP method.

No.	Sample ^a	$M_{n, NMR}$ ^b	PDI ^c	Q% (mol%) ^d
1	(+)-PEO ₁₁₄ - <i>b</i> -P(D ₄₄ Q ₄)	13,500	1.10	8.3
2	(+)-PEO ₁₁₄ - <i>b</i> -P(D ₃₀ Q ₇)	12,500	1.09	18.9
3	(+)-PEO ₁₁₄ - <i>b</i> -P(D ₂₀ Q ₁₁)	12,500	1.07	35.5
4	(+)-PEO ₁₁₄ - <i>b</i> -P(D ₂₄ Q ₂₁)	17,100	1.09	46.7
5	(+)-PEO ₁₁₄ - <i>b</i> -P(Q ₁₀)	9,000	1.07	100.0
6	(-)-PEO ₁₁₄ - <i>b</i> -P(D ₄₄ Q ₁₃)	17,000	1.25	22.8
7	(-)-PEO ₁₁₄ - <i>b</i> -P(D ₂₇ Q ₁₂)	14,000	1.16	30.8
8	(-)-PEO ₁₁₄ - <i>b</i> -P(D ₁₅ Q ₁₀)	11,300	1.18	40.0

^a The number of different kind of unit in each polymer was determined by ¹H NMR. ^b Number-average molecular weight, M_n , determined by ¹H NMR. ^c Polydispersity determined by GPC. ^d Q% is defined as the ratio of the number of Q units to the polymerization degree of the polymer through ATRP, regardless of the PEO block.

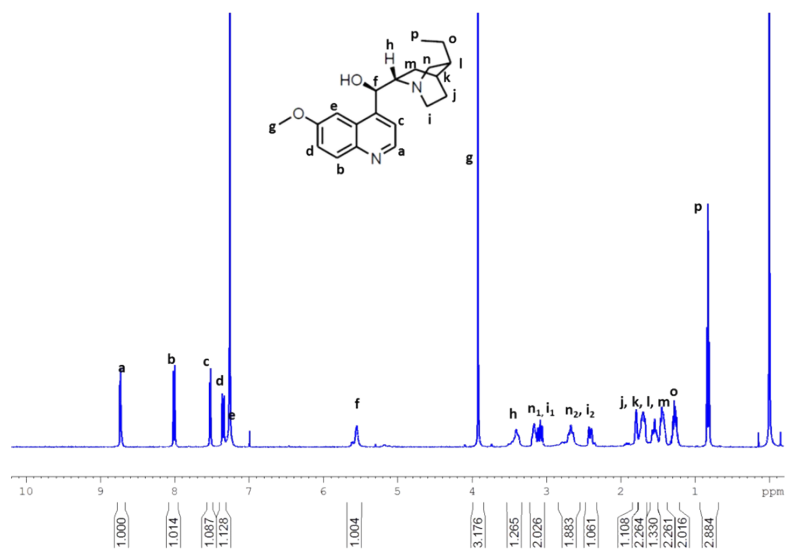


Figure S1. ^1H NMR spectrum of hydroquinine in CDCl_3 .

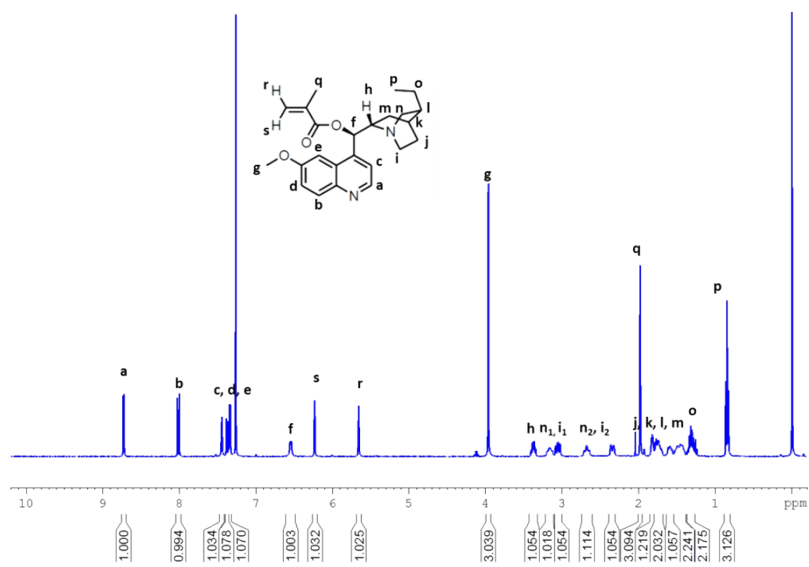


Figure S2. ^1H NMR spectrum of (+)-Q in CDCl_3 .

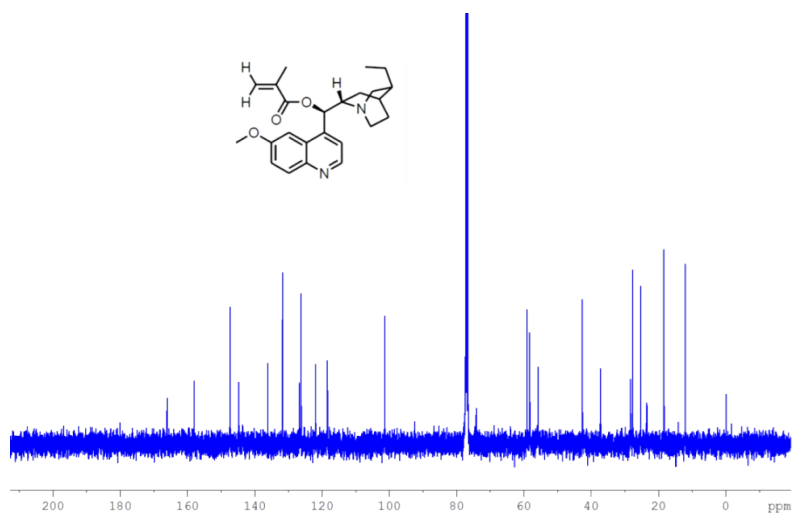


Figure S3. ^{13}C NMR spectrum of (+)-Q in CDCl_3 .

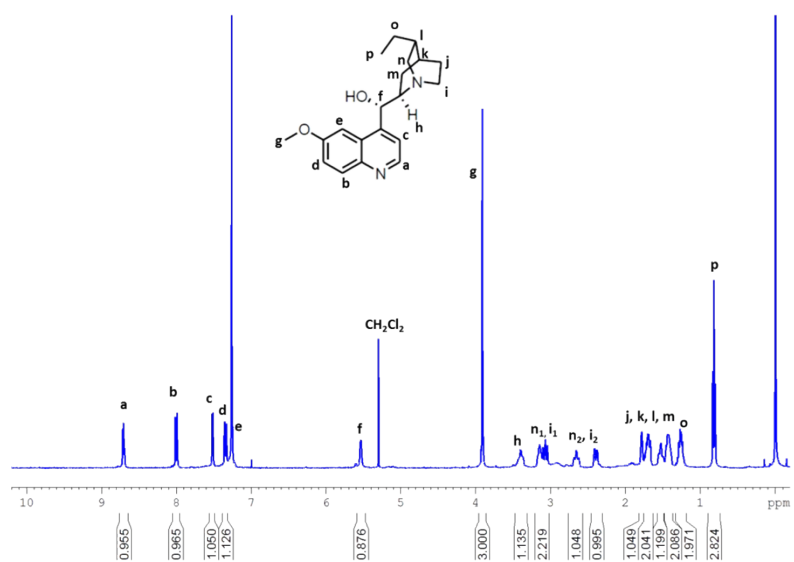


Figure S4. ^1H NMR spectrum of hydroquinidine in CDCl_3 .

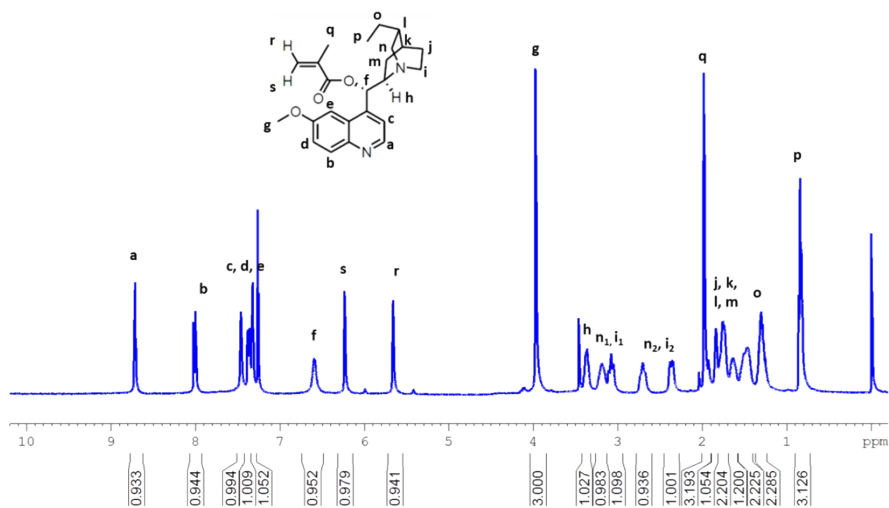


Figure S5. ^1H NMR spectrum of (-)-Q in CDCl_3 .

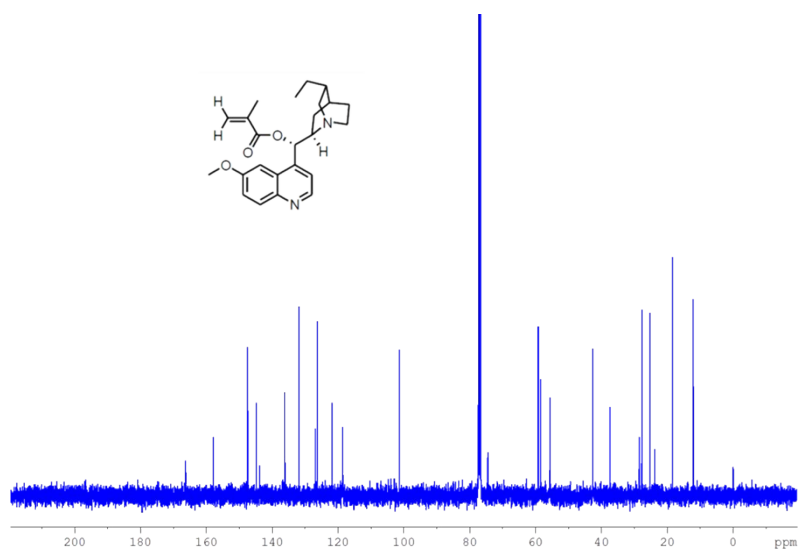


Figure S6. ^{13}C NMR spectrum of (-)-Q in CDCl_3 .

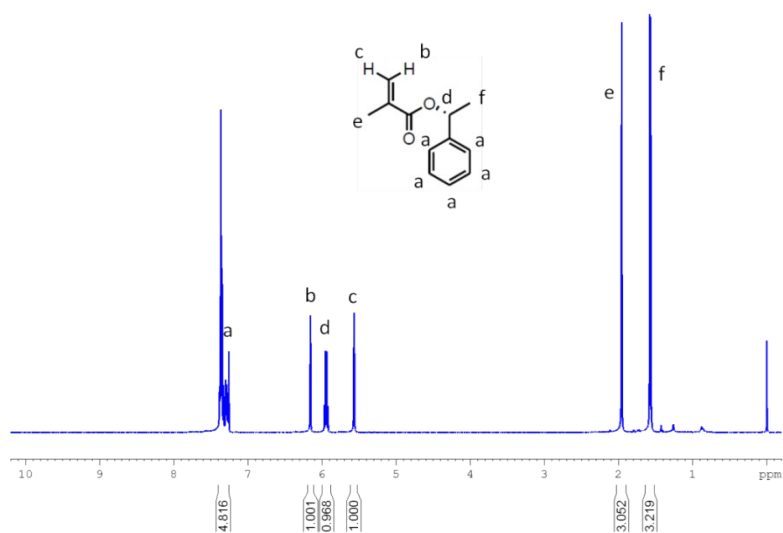


Figure S7. ^1H NMR spectrum of (R)-PhEMA in CDCl_3 .

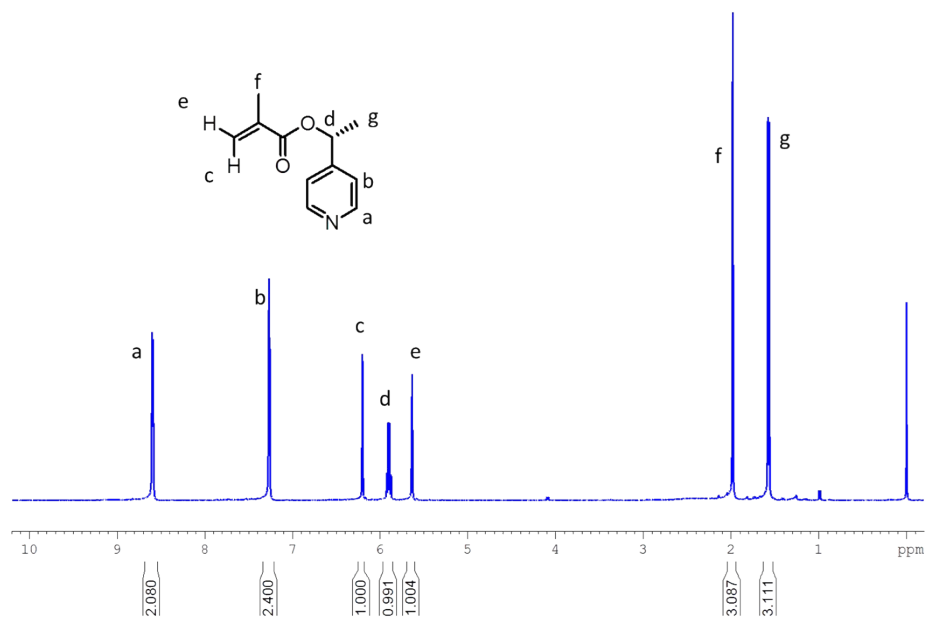


Figure S8. ^1H NMR spectrum of (R) -PyEMA in CDCl_3 .

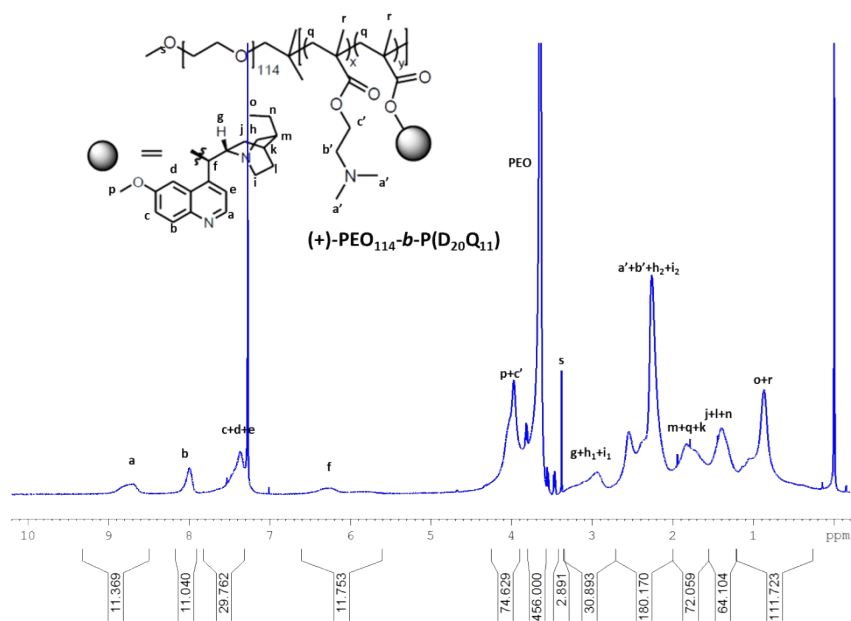


Figure S9. Typical ^1H NMR spectrum of diblock copolymer $(+)$ -PEO₁₁₄-*b*-P(D₂₀Q₁₁) in CDCl_3 .

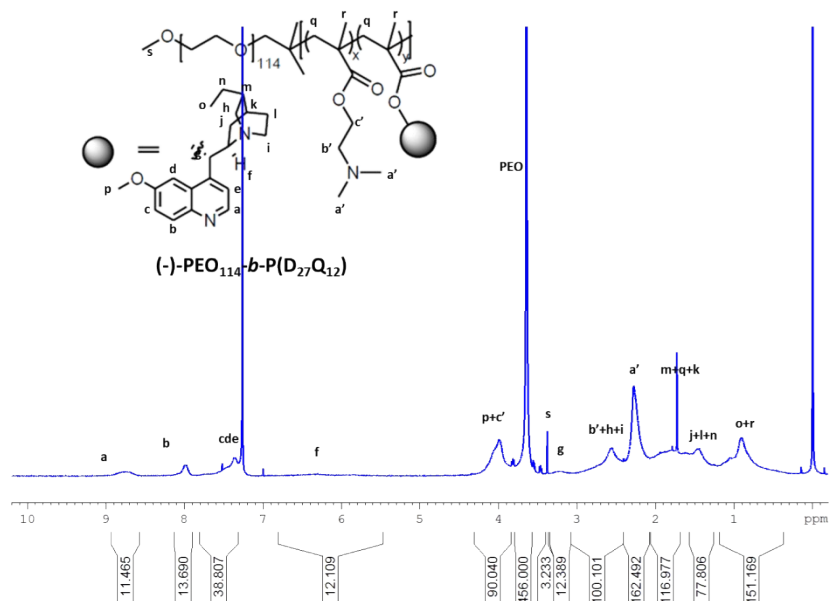


Figure S10. Typical ^1H NMR spectrum of diblock copolymer $(-)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_{27}\text{Q}_{12})$ in CDCl_3 .

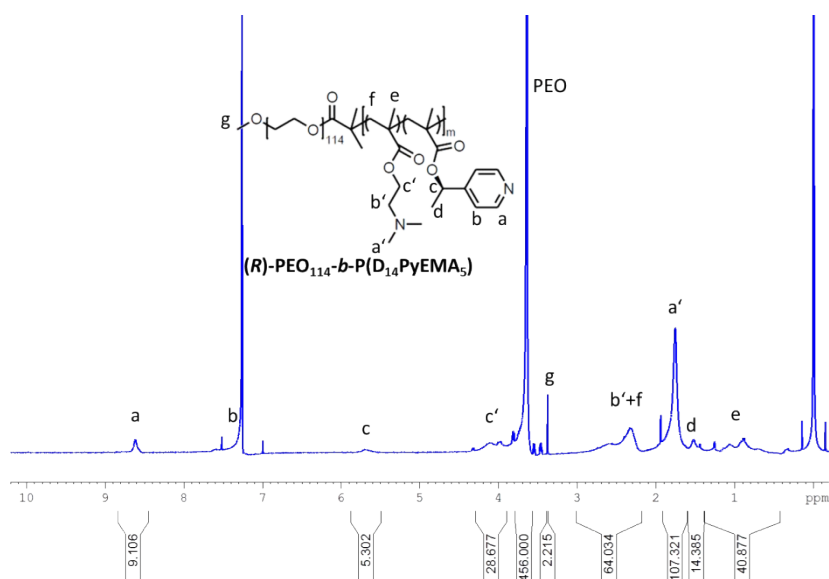


Figure S11. ^1H NMR spectrum of diblock copolymer $(R)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_{14}\text{PyEMA}_5)$ in CDCl_3 .

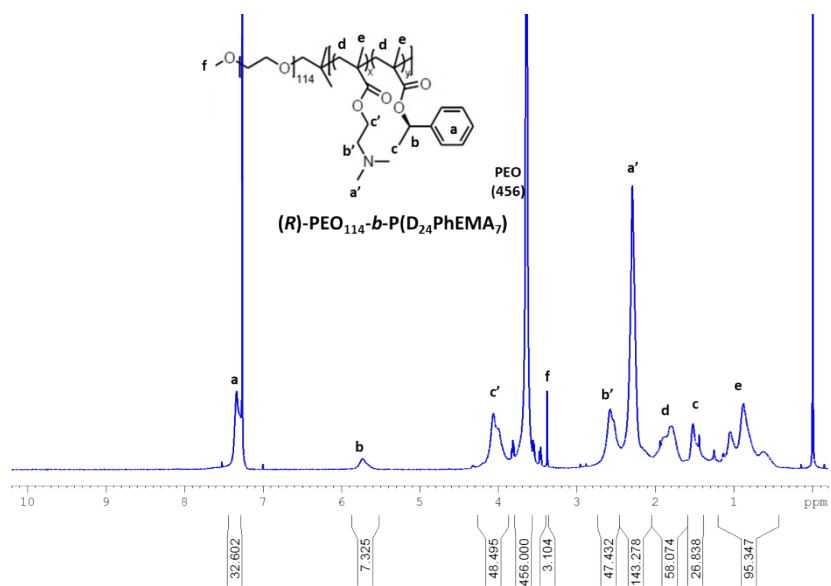


Figure S12. ^1H NMR spectrum of diblock copolymer $(R)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_{24}\text{PhEMA}_7)$ in CDCl_3 .

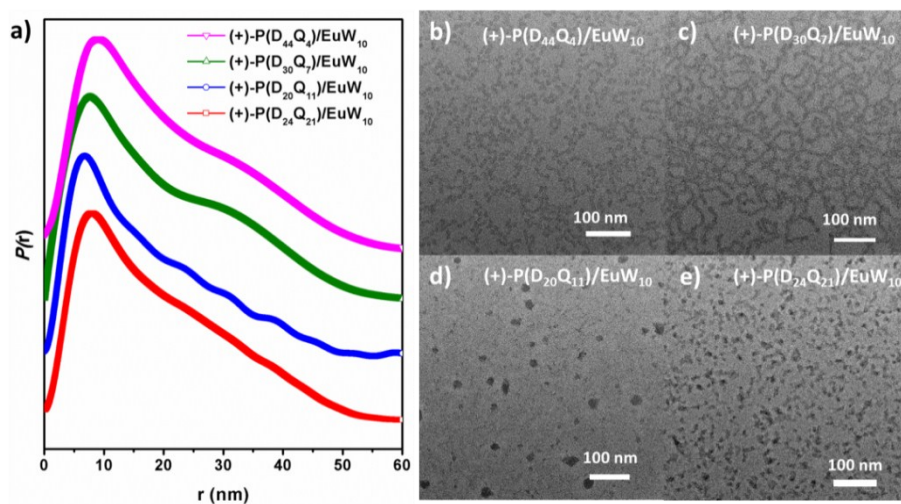


Figure S13. a) The distance distribution, $P(r)$, and b) - e) TEM images for $(+)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_x\text{Q}_y)/\text{EuW}_{10}$ mixtures.

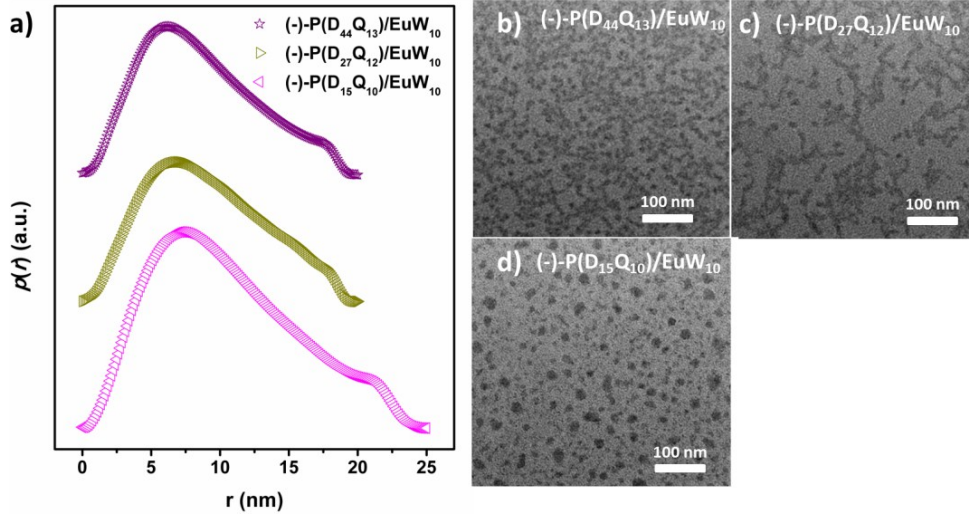


Figure S14. a) The distance distribution, $P(r)$, and b) – d) TEM images for $(-)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_x\text{Q}_y)/\text{EuW}_{10}$ mixtures.

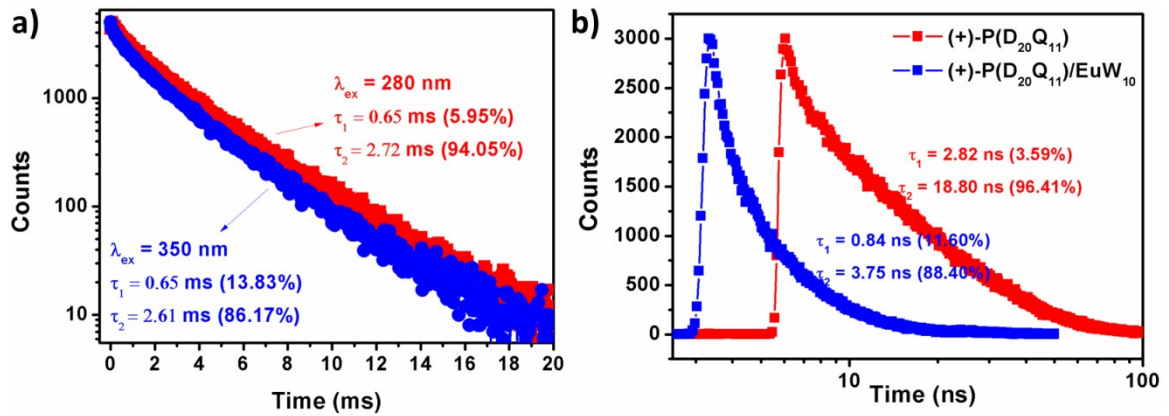


Figure S15. a) Luminescence decays of EuW_{10} in $(+)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_{20}\text{Q}_{11})/\text{EuW}_{10}$ mixture at 280 nm and 350 nm excitation wavelengths. b) Luminescence decays of $(+)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_{20}\text{Q}_{11})$ before and after mixed with EuW_{10} . The excitation wavelength was 350 nm.

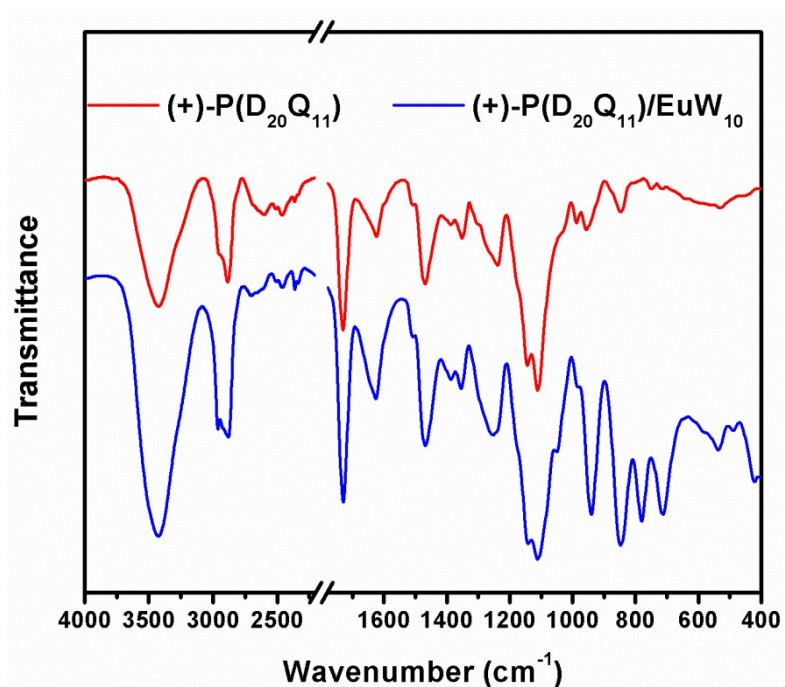


Figure S16. FT-IR spectra of (+)-PEO₁₁₄-*b*-P(D₂₀Q₁₁) polymer and (+)-PEO₁₁₄-*b*-P(D₂₀Q₁₁)/EuW₁₀.

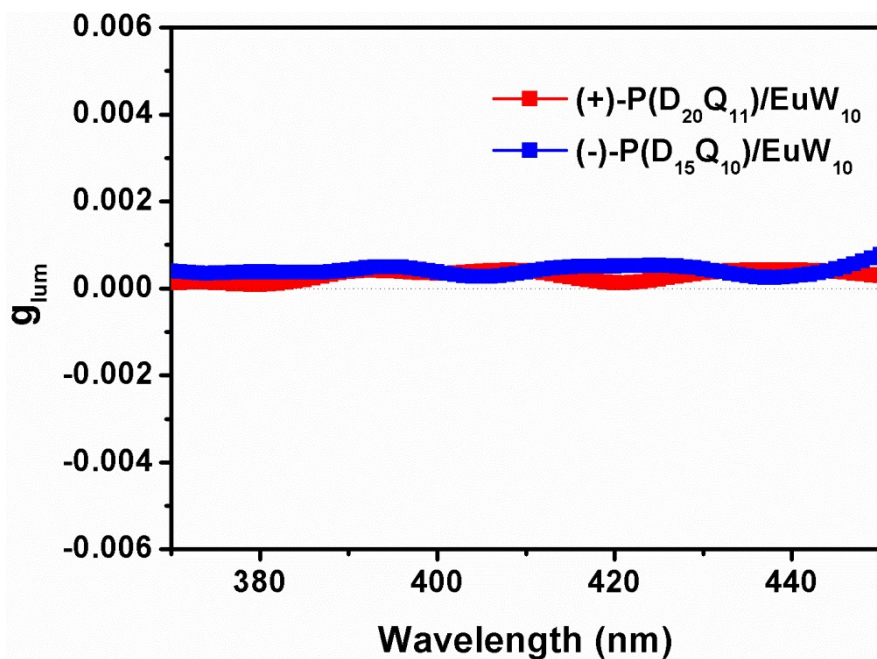


Figure S17. Circularly polarized luminescence spectra of (+)-PEO₁₁₄-*b*-P(D₂₀Q₁₁)/EuW₁₀ and (-)-PEO₁₁₄-*b*-P(D₁₅Q₁₀)/EuW₁₀.

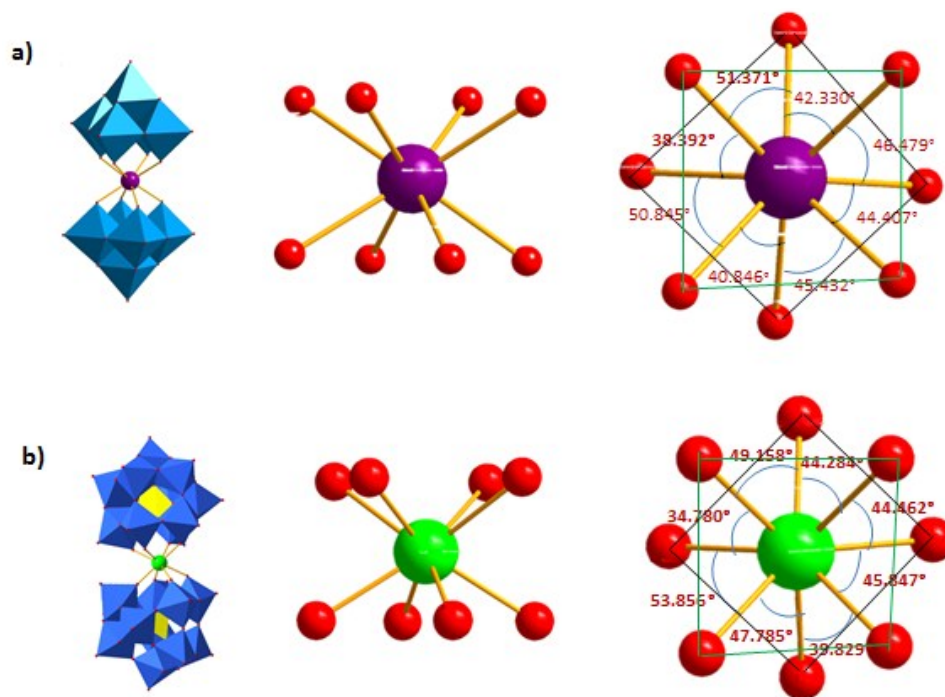


Figure S18. Crystal structure (left), top view (middle), and side view (right) of a) $[\text{EuW}_{10}\text{O}_{36}]^{9-}$ and b) $[\text{Eu}(\text{SiW}_{11}\text{O}_{39})_2]^{13-}$.

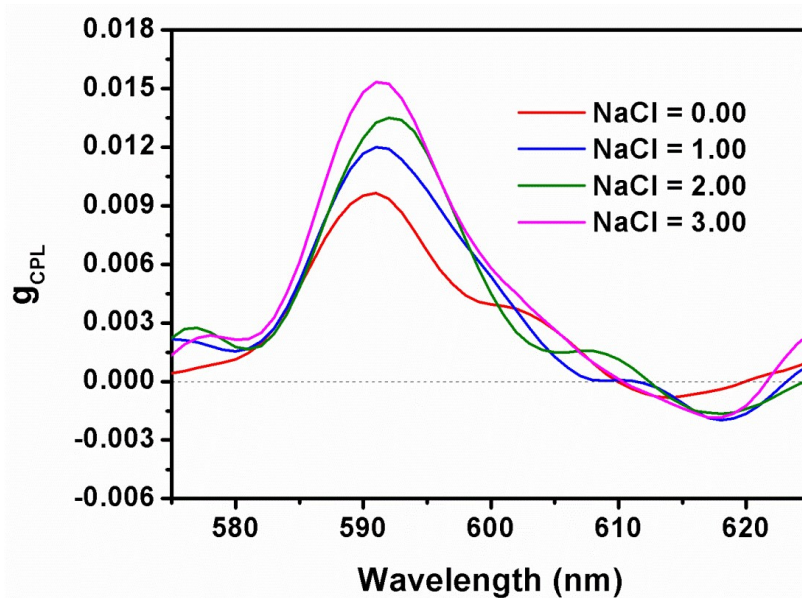


Figure S19. Circularly polarized luminescence spectra of $(+)\text{-PEO}_{114}\text{-}b\text{-P}(\text{D}_{20}\text{Q}_{11})/\text{K}_{13}[\text{Eu}(\text{SiW}_{11}\text{O}_{39})_2]$ at different concentrations of NaCl (M). The excitation wavelength was 350 nm.

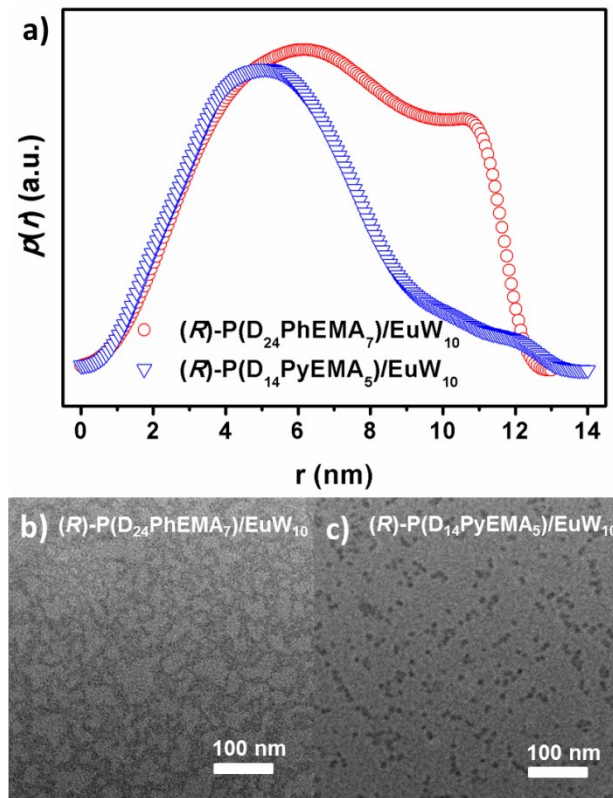


Figure S20. a) The distance distribution, $P(r)$, and b) - c) TEM images of $(R)\text{-PEO}_{114}\text{-}b\text{-P}(D_{24}\text{PhEMA}_7)/\text{EuW}_{10}$ and $(R)\text{-PEO}_{114}\text{-}b\text{-P}(D_{14}\text{PyEMA}_5)/\text{EuW}_{10}$ mixtures.

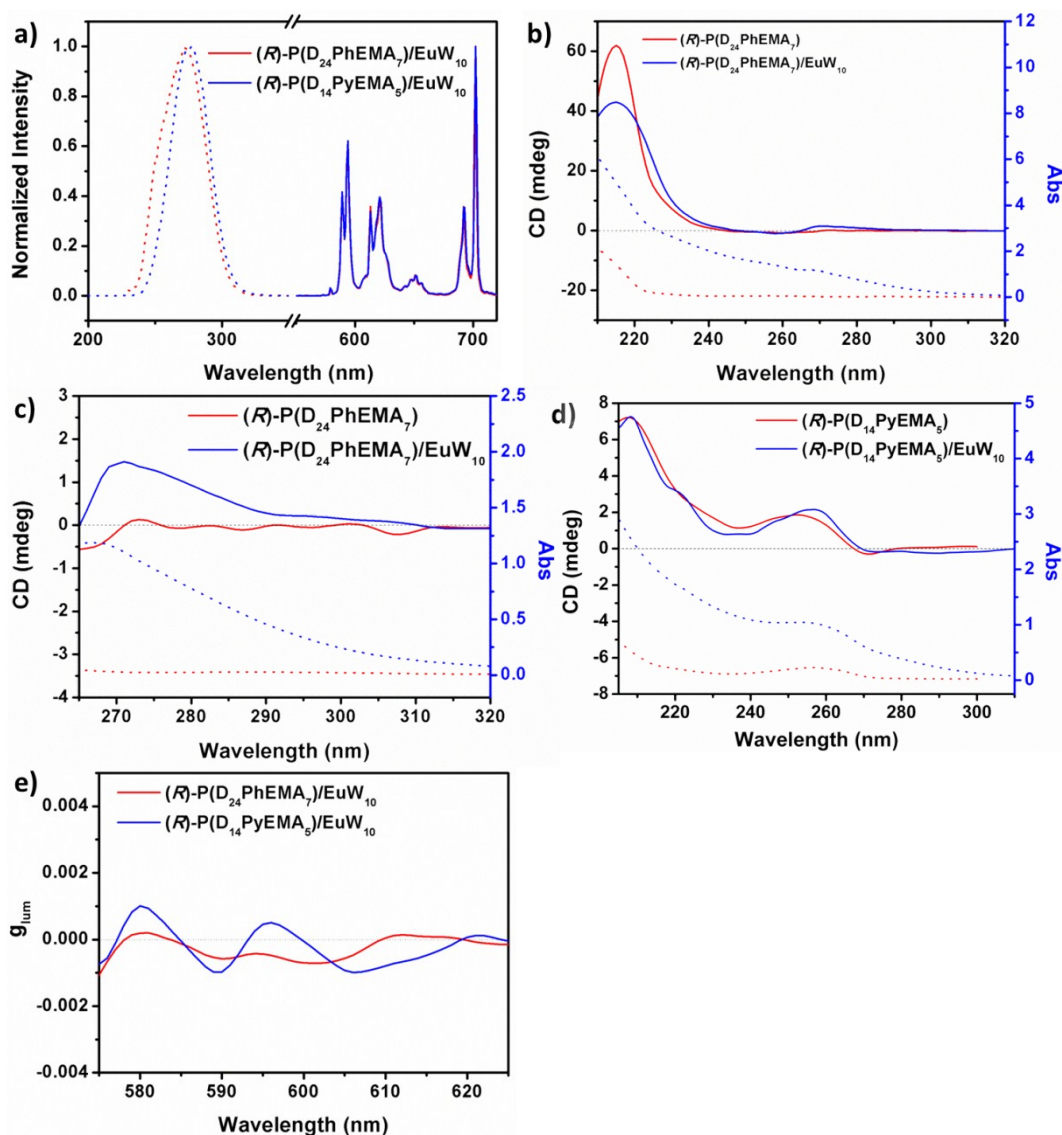


Figure S21. a) Normalized excitation spectra (dotted line) and emission spectra (solid line) of (R)-PEO₁₁₄-P(D₂₄PhEMA₇)/EuW₁₀ (red line) and (R)-PEO₁₁₄-b-P(D₁₄PyEMA₅)/EuW₁₀ (blue line). Circular dichroism (solid line) and absorption (dotted line) spectra of b) (R)-PEO₁₁₄-P(D₂₄PhEMA₇) from 210 to 320 nm, c) (R)-PEO₁₁₄-P(D₂₄PhEMA₇) from 265 nm to 320 nm, and d) (R)-PEO₁₁₄-b-P(D₁₄PyEMA₅) before (red line) and after (blue line) coassembly with EuW₁₀. e) Circularly polarized luminescence spectra of (R)-PEO₁₁₄-b-P(D₂₄PhEMA₇)/EuW₁₀ and (R)-PEO₁₁₄-b-P(D₁₄PyEMA₅)/EuW₁₀ mixtures. The excitation wavelength was 280 nm, and the monitoring wavelength was 589 nm.

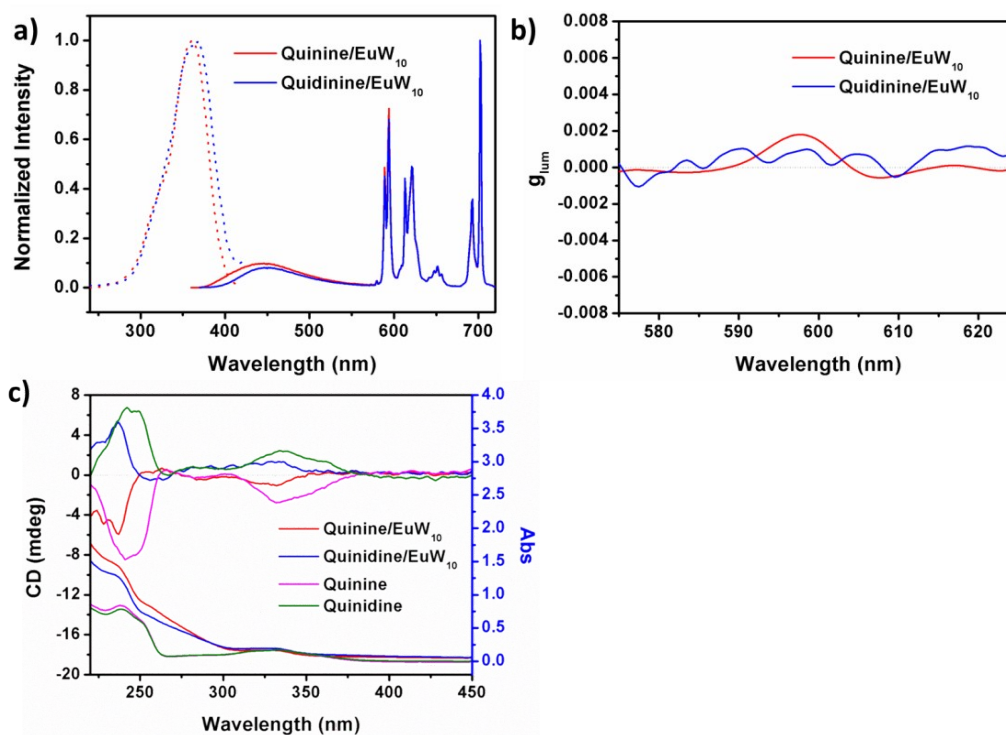


Figure S22. a) Normalized excitation (dash line) and emission (solid line) spectra and b) circularly polarized luminescence spectra of Quinine/EuW₁₀ and Quidinine/EuW₁₀ mixtures with the molar ratio of organic molecule/EuW₁₀ being 1/1 and the concentration of organic molecule around 0.65 mg ml⁻¹ at pH = 4.11. The excitation wavelength was 350 nm and the monitoring wavelength was 589 nm. c) Circular dichroism spectra (top) and absorption spectra (bottom) of Quinine, Quidinine, Quinine/EuW₁₀ and Quidinine/EuW₁₀ solutions.

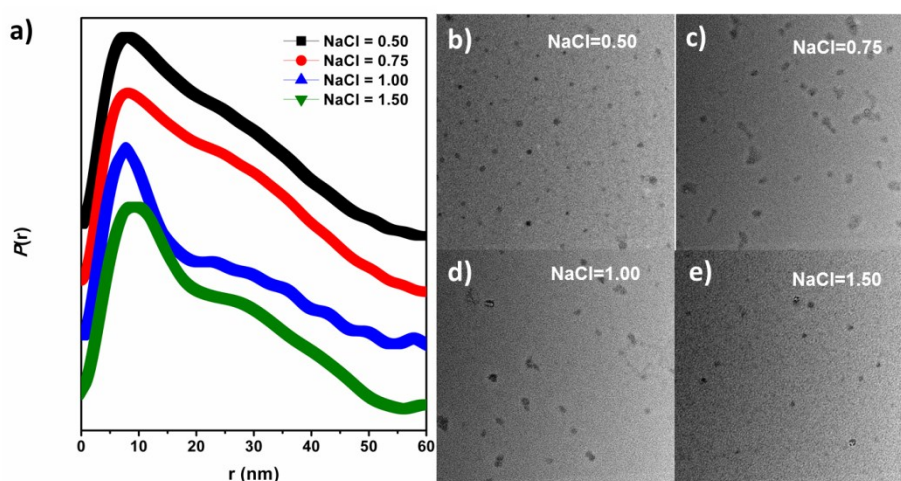


Figure S23. a) The distance distribution, $P(r)$, in SAXS measurement and b) – e) TEM images of (+)-PEO₁₁₄-*b*-P(D₂₀Q₁₁)/EuW₁₀ assembly at different concentrations of NaCl (M).

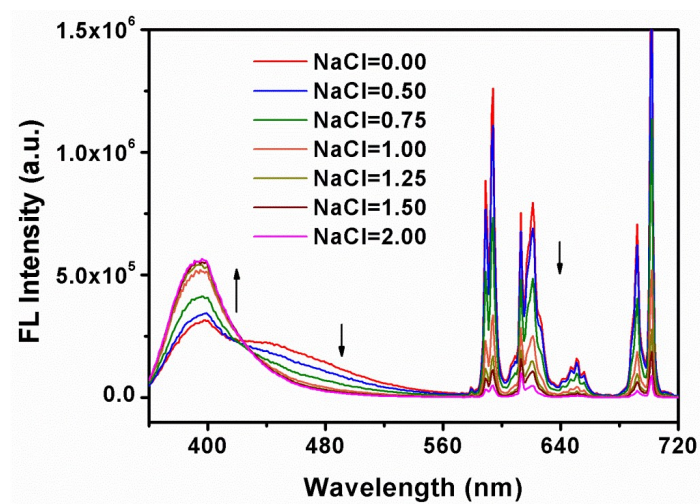


Figure S24. Emission spectra of (+)-PEO₁₁₄-*b*-P(D₂₀Q₁₁)/EuW₁₀ mixtures excited at 350 nm under different NaCl concentrations (M).

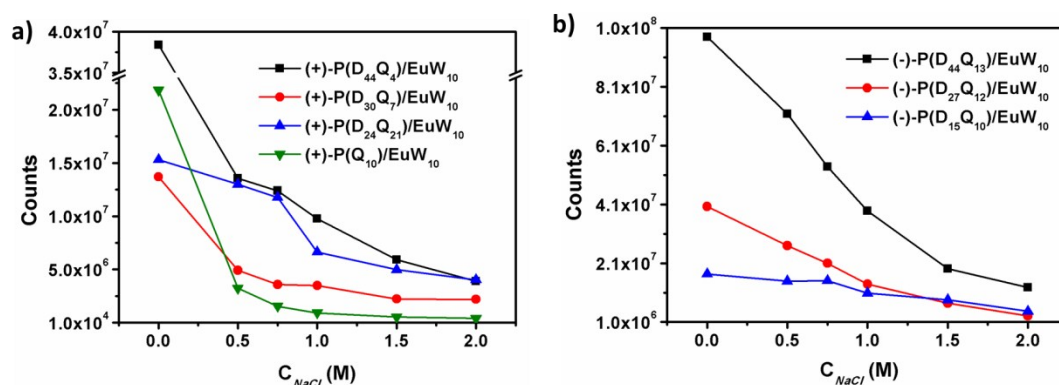


Figure S25. The emission intensities of EuW₁₀ in a) (+)-PEO₁₁₄-*b*-P(D_xQ_y)/EuW₁₀ and b) (-)-PEO₁₁₄-*b*-P(D_xQ_y)/EuW₁₀ at different NaCl concentrations (M). The excitation wavelength was 350 nm. The emission intensity was acquired by integrating the emission spectra from 570 nm to 720 nm.

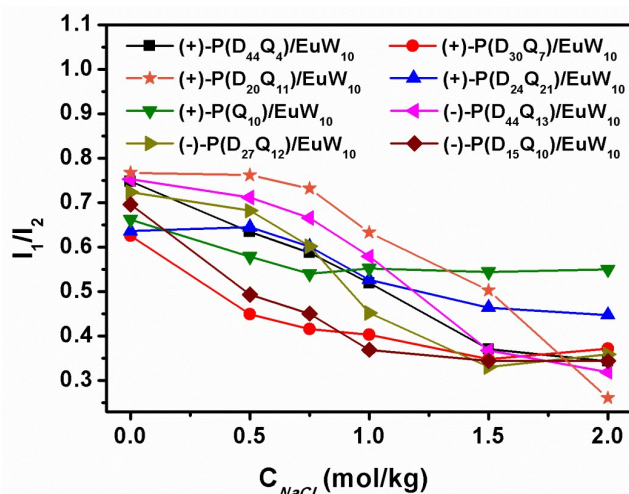


Figure S26. The ratios of I_1 to I_2 of EuW_{10} in (+)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_x\text{Q}_y)/\text{EuW}_{10}$ at different NaCl concentrations (M). The excitation wavelength was 350 nm. The emission intensity I_1 and I_2 was acquired by integrating the emission spectra from 583 nm to 602 nm and from 603 nm to 638 nm respectively.

Table S2. Summary of fitted lifetimes τ_1 and τ_2 , and corresponding fractions a_1 and a_2 of EuW_{10} in (+)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_x\text{Q}_y)/\text{EuW}_{10}$ and (-)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_x\text{Q}_y)/\text{EuW}_{10}$ at different NaCl concentrations. The excitation wavelength was 350 nm and the monitoring wavelength was 589 nm.

Sample	NaCl (M)	τ_1 (ms)	a_1	τ_2 (ms)	a_2	χ^2
(+)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_{44}\text{Q}_4)/\text{EuW}_{10}$	0.00	0.89	13.14	3.01	86.86	1.090
	0.50	0.75	12.48	2.74	87.52	1.146
	0.75	0.75	13.40	2.78	86.60	1.133
	1.00	0.76	16.05	2.76	83.95	1.127
	1.50	0.48	12.99	2.05	87.01	1.129
(+)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_{30}\text{Q}_7)/\text{EuW}_{10}$	0.00	0.96	14.16	2.90	85.84	1.267
	0.50	0.70	9.34	2.65	90.66	1.101
	0.75	0.60	9.54	2.39	90.46	1.141
	1.00	0.81	16.46	2.52	83.54	1.086
	1.50	0.58	13.31	1.98	86.69	1.069
(+)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_{20}\text{Q}_{11})/\text{EuW}_{10}$	0.00	0.65	13.83	2.61	86.17	1.142
	0.50	0.90	16.95	2.91	83.05	1.243
	0.75	0.94	14.93	2.86	85.07	1.113
	1.00	0.95	16.48	2.72	83.52	1.172
	1.50	0.73	10.83	2.49	89.17	1.147
	2.00	0.64	8.68	2.27	91.32	1.178
(+)- $\text{PEO}_{114}\text{-}b\text{-P}(\text{D}_{24}\text{Q}_{21})/\text{EuW}_{10}$	0.00	0.57	18.69	2.02	81.31	1.154
	0.50	0.59	17.45	2.12	82.55	1.21
	0.75	0.49	13.3	2.06	86.7	1.148
	1.00	0.55	14.02	2.00	85.98	1.069
	1.50	0.52	13.66	2.00	86.34	1.143

	2.00	0.55	14.14	1.89	85.86	1.032
(+)-PEO₁₁₄-b-P(Q₁₀)/EuW₁₀	0.00	0.49	14.55	2.09	85.45	1.283
	0.50	0.28	6.76	2.20	93.24	1.075
	0.75	0.24	8.74	2.28	91.26	1.159
(-)-PEO₁₁₄-b-P(D₄₄Q₁₃)/EuW₁₀	0.00	0.90	10.95	2.84	89.05	1.223
	0.50	0.36	1.16	2.52	98.84	1.300
	0.75	0.98	8.68	3.09	91.32	1.226
	1.00	1.03	8.01	2.83	91.99	1.231
	1.50	0.69	4.85	2.58	95.15	1.225
(-)-PEO₁₁₄-b-P(D₂₇Q₁₂)/EuW₁₀	0.00	0.93	16.68	2.75	83.32	1.304
	0.50	0.85	15.3	2.66	84.7	1.201
	0.75	0.74	12.57	2.54	87.43	1.029
	1.00	0.54	6.80	2.14	93.20	1.099
	1.50	0.29	2.17	1.55	97.83	1.101
	2.00	0.79	20.61	2.27	79.39	1.118
(-)-PEO₁₁₄-b-P(D₁₅Q₁₀)/EuW₁₀	0.00	0.77	19.38	2.53	80.62	1.102
	0.50	0.55	9.36	2.06	90.64	1.075
	0.75	0.59	14.62	2.22	85.38	1.08
	1.00	0.76	19.25	3.67	80.75	1.027
	1.50	0.32	6.06	1.56	93.94	1.072

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