

## Supplementary Material

### **Cationic Micelles Based on Polyhedral Oligomeric Silsesquioxanes for Enhanced Gene Transfection**

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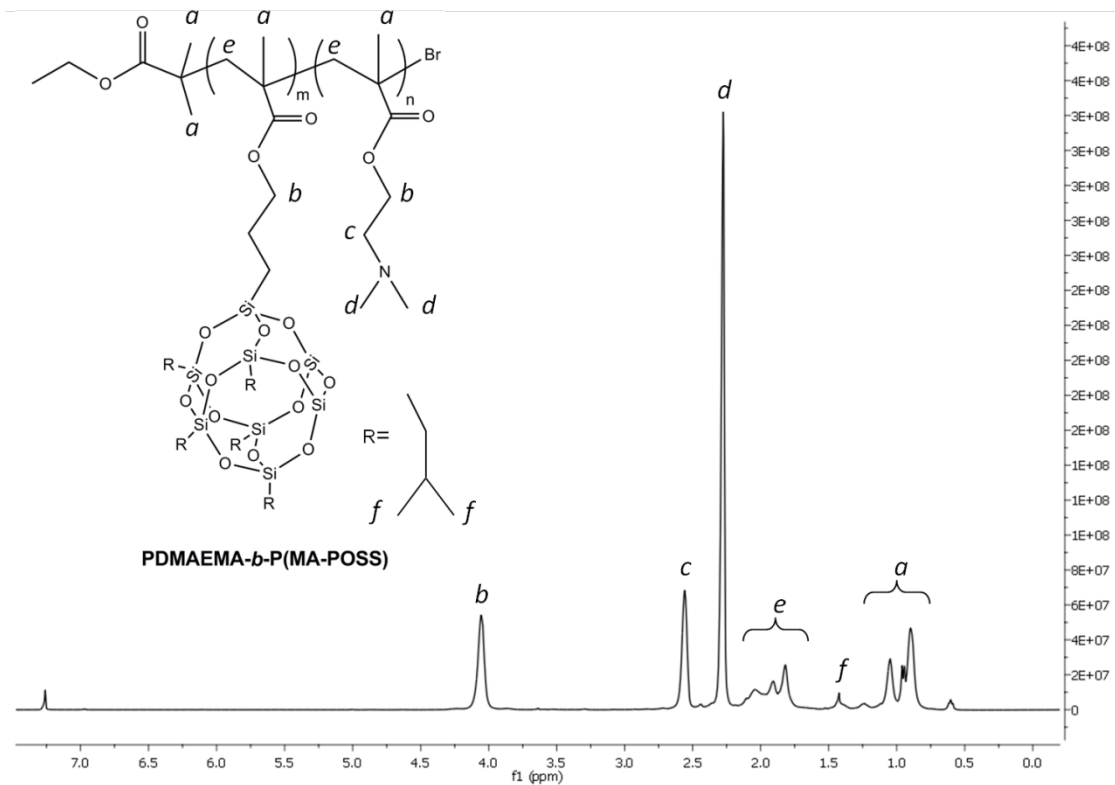


Figure S1. 400 MHz <sup>1</sup>H NMR of PDMAEMA-*b*-P(MA-POSS) in CDCl<sub>3</sub>.

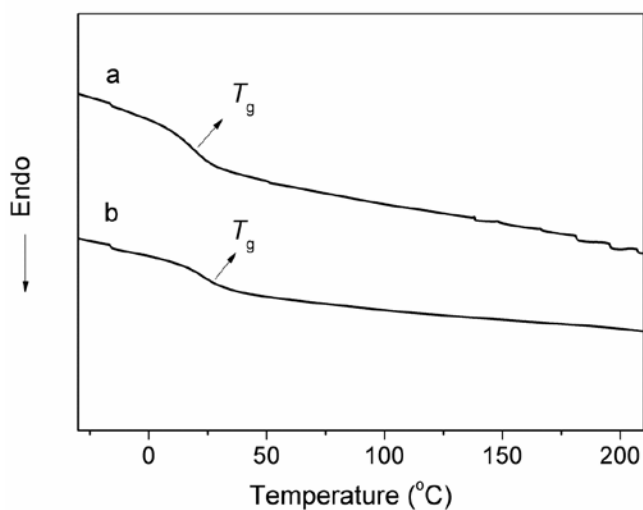
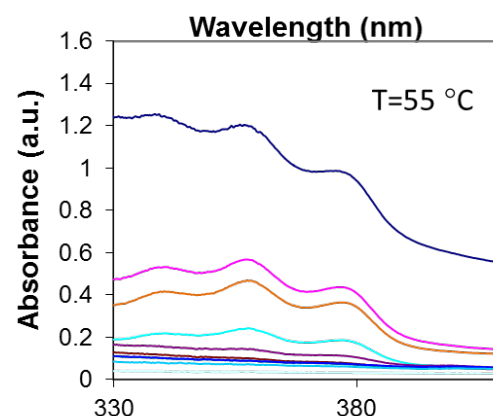
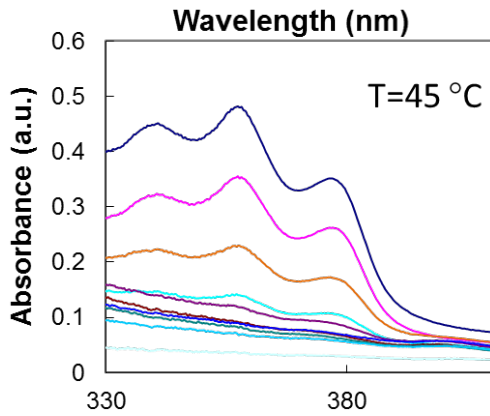
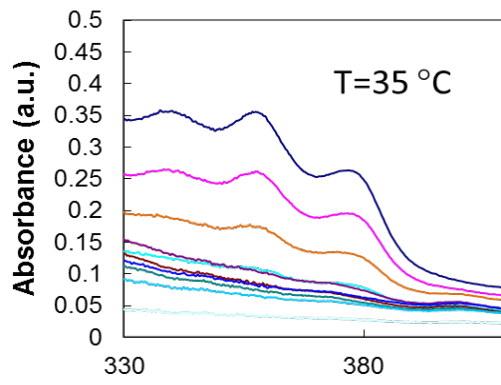
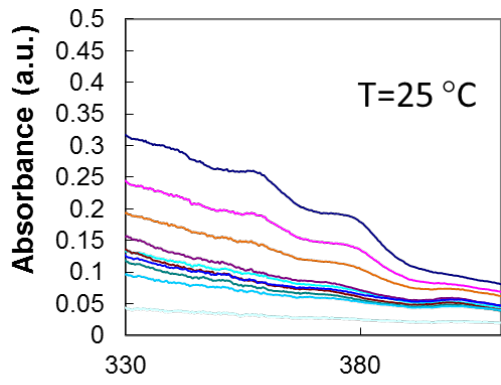


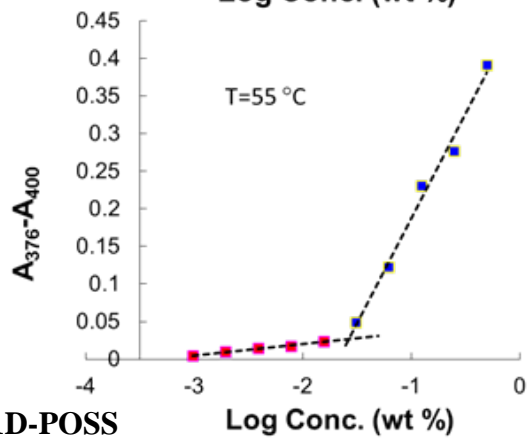
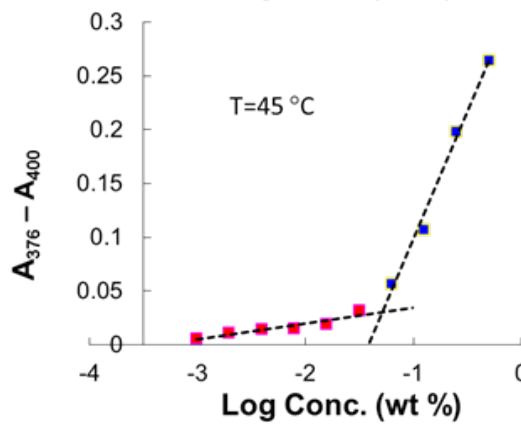
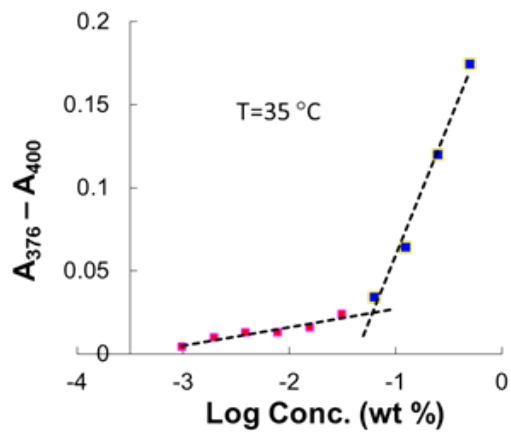
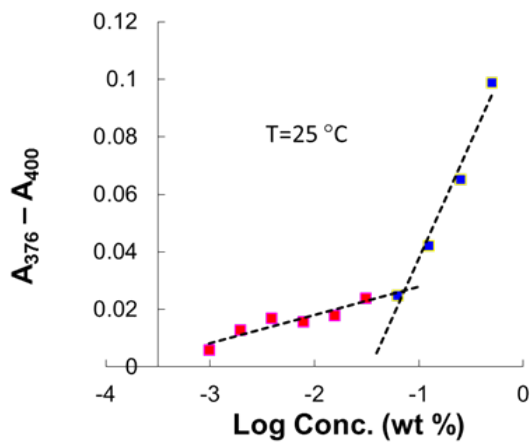
Figure S2. DSC curves for #1D-POSS and #2D-POSS.



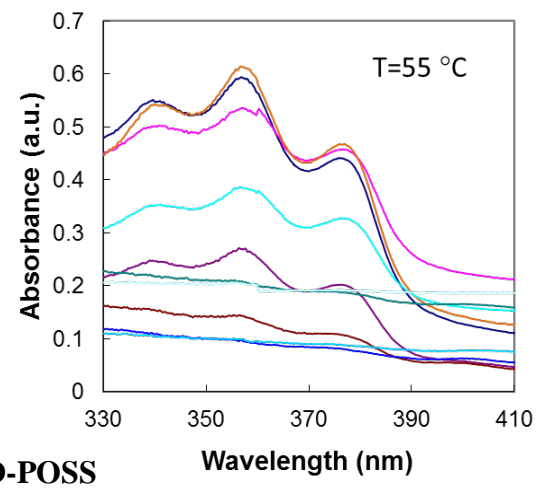
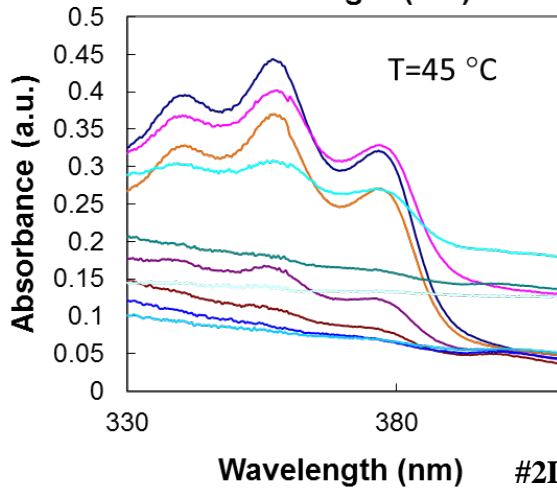
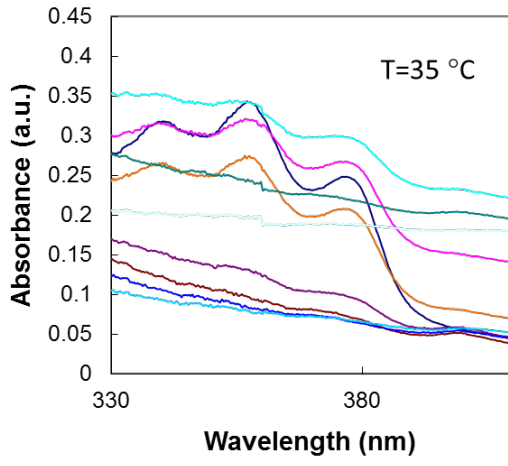
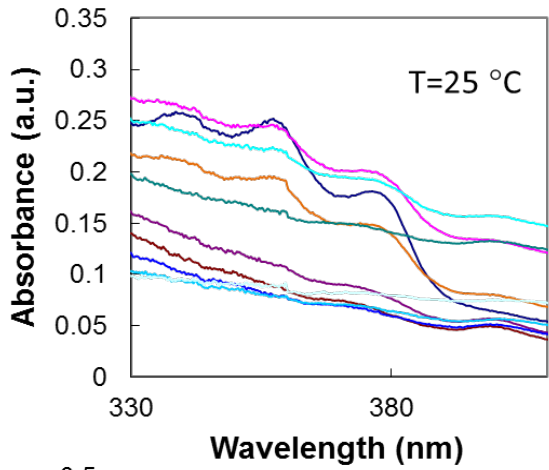
Wavelength (nm)

#1D-POSS

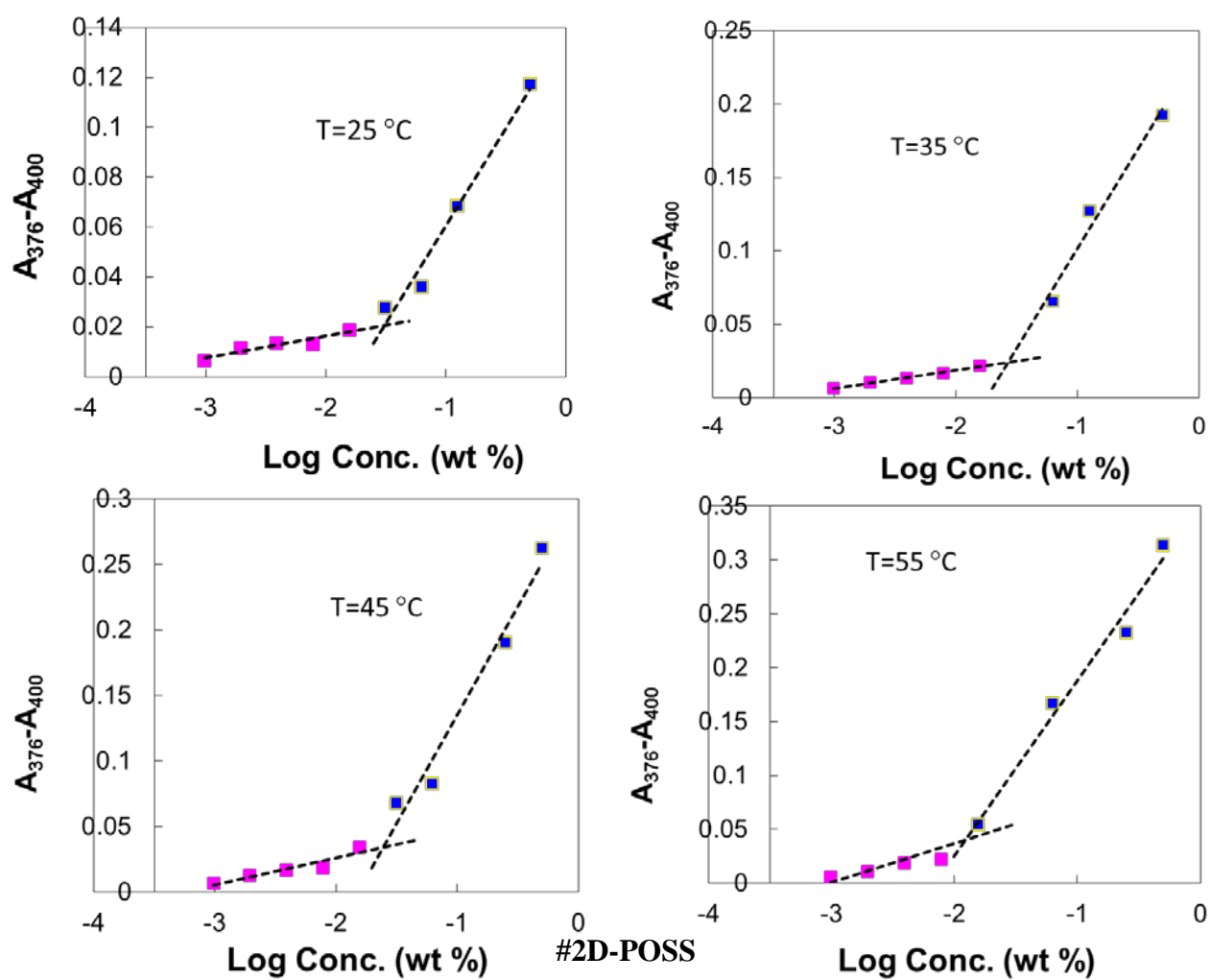
Wavelength (nm)



#1D-POSS



Wavelength (nm) #2D-POSS



**Figure S3.** Absorbance and plots of the change in absorbance at 376 nm and 400 nm ( $A_{376} - A_{400}$ ) versus logarithmic concentration for #1D-POSS and #2D-POSS.

**Table S1.** Concentration of #1D-POSS, #2D-POSS, PEI and PDMAEMA used to prepare polyplexes with N:P ratios 0 ~40 for gel electrophoresis, MTT and Luciferase assays.

	<b>#1D-POSS</b>	<b>#2D-POSS</b>	<b>PEI</b>	<b>PDMAEMA</b>
<b>N:P</b>	<i>[Polymer] in Polyplexes with pDNA (1 µg) (<math>\times 10^{-3}</math> g/mL)</i>			
10	0.25	0.30	0.07	0.24
20	0.50	0.59	0.13	0.48
30	0.75	0.89	0.20	0.72
40	1.00	1.18	0.26	0.96
	<i>[Polymer] when Diluted into MTT Assay Media (100 uL) (<math>\times 10^{-3}</math> g/mL)</i>			
10	0.03	0.03	0.01	0.02
20	0.05	0.06	0.01	0.05
30	0.08	0.09	0.02	0.07
40	0.10	0.12	0.03	0.10
	<i>[Polymer] when Diluted into Luciferase Assay Media (300 uL) (<math>\times 10^{-3}</math> g/mL)</i>			
10	0.02	0.02	0.00	0.02
20	0.03	0.04	0.01	0.03
30	0.05	0.06	0.01	0.05
40	0.07	0.08	0.02	0.06