

## Supporting Information

### Polymer–Nucleobase Composites for Chemotherapy Drug Capture

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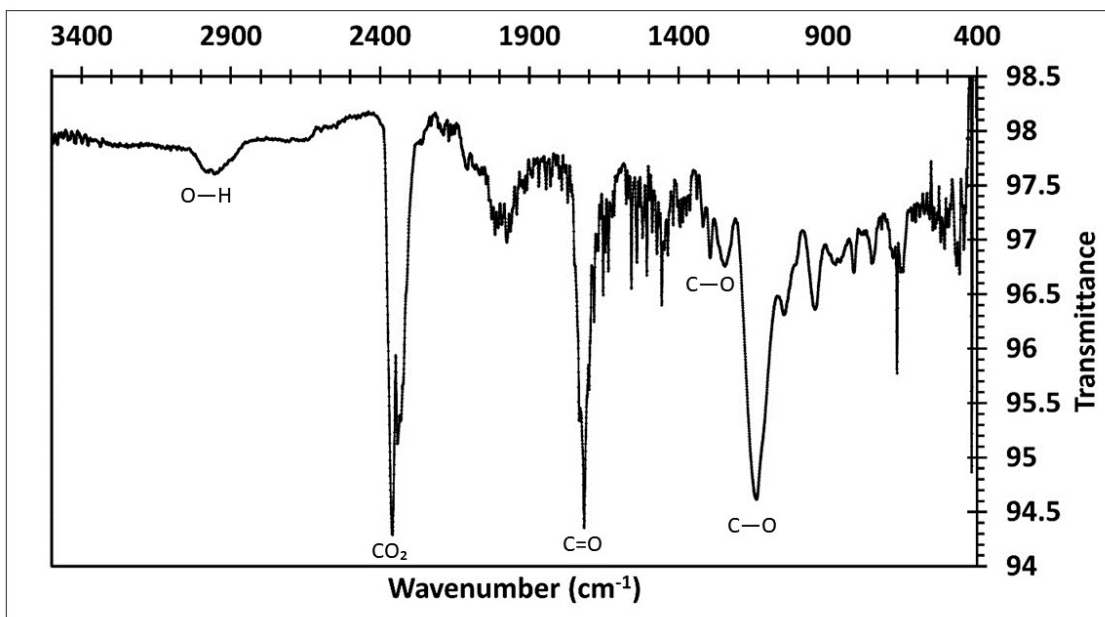
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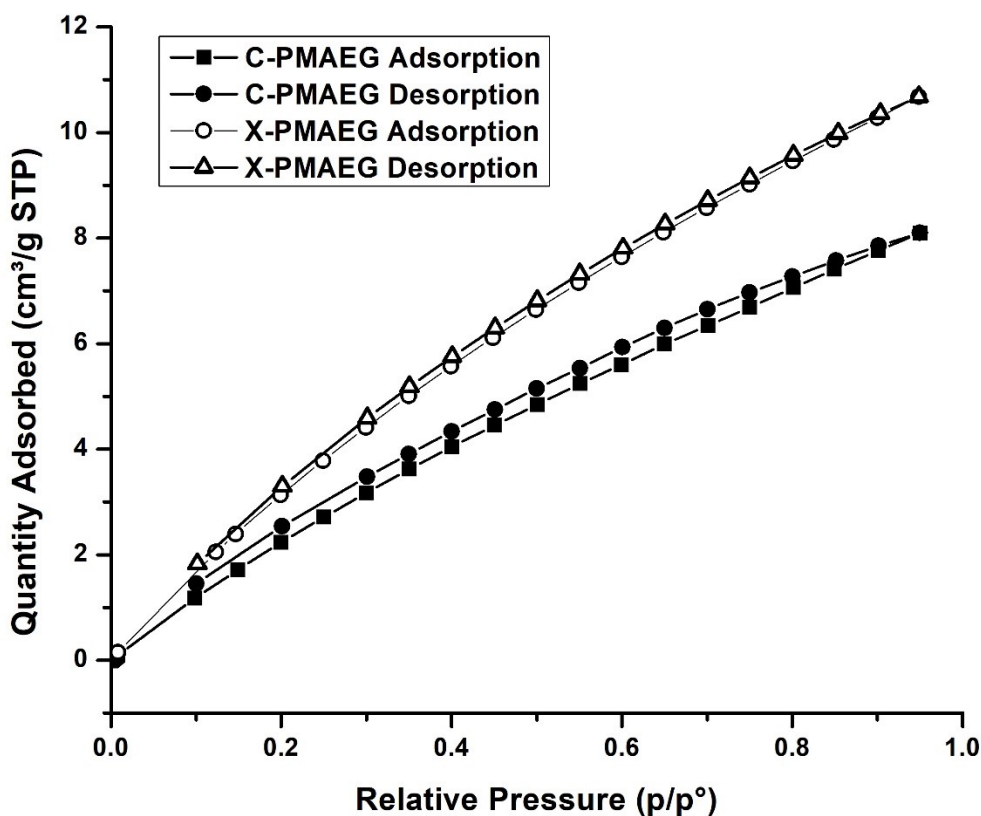
**Figure S1.** Illustration of DOX capture set-up using UV probe and filter. The polymer composites were stirred continually in DOX–PBS solution beneath the filter.



**Figure S2.** FTIR spectrum of PMAEG confirming successful incorporation of MA and EGDMA with vibration bands corresponding to the O—H, C=O, and C—O from MA and EGDMA

**Table S1.** Nucleobase content in each polymer composite. <sup>A</sup>: Weight percent of N obtained from elemental analysis duplicate of “As-synthesized” resins. <sup>B</sup>: Mass of nucleobase incorporated into polymer composite per gram of resin. <sup>C</sup>: Weight percent of N obtained from elemental analysis for “R-1” material conducted in duplicate.

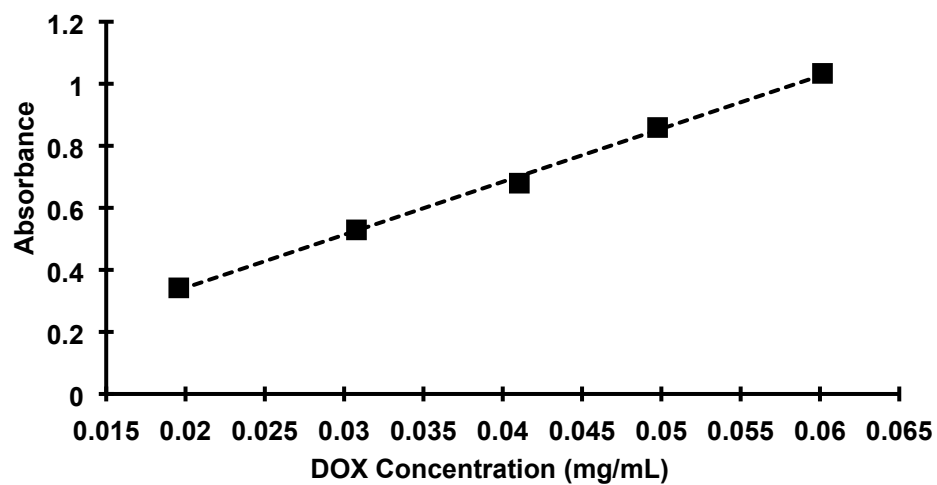
Nucleobase	%N <sup>A</sup>	%N <sup>A</sup>	mg of nucleobase incorporated per g of resin <sup>B</sup>	Nucleobase content in R1 Series	
				%N <sup>C</sup>	%N <sup>C</sup>
Adenine	0.40	0.51	8.78	0.08	0.01
Cytosine	3.85	4.19	106.34	0.00	0.00
Thymine	0.46	0.70	26.12	0.00	0.00
Xanthine	4.21	3.97	111.09	0.00	0.00



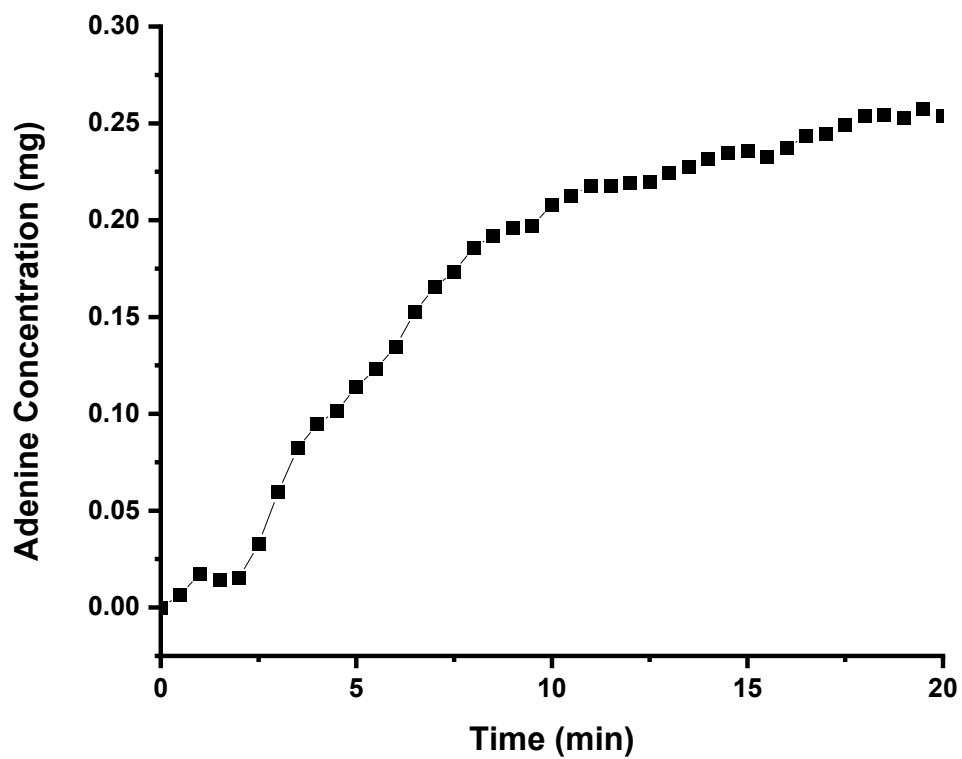
**Figure S3.** CO<sub>2</sub> Adsorption of C-PMAEG and X-PMAEG at 22°C

Resin	Pore Size (Å)
PMAEG	6.4
X-PMAEG	6.0
T-PMAEG	6.1
A-PMAEG	6.8
C-PMAEG	5.9

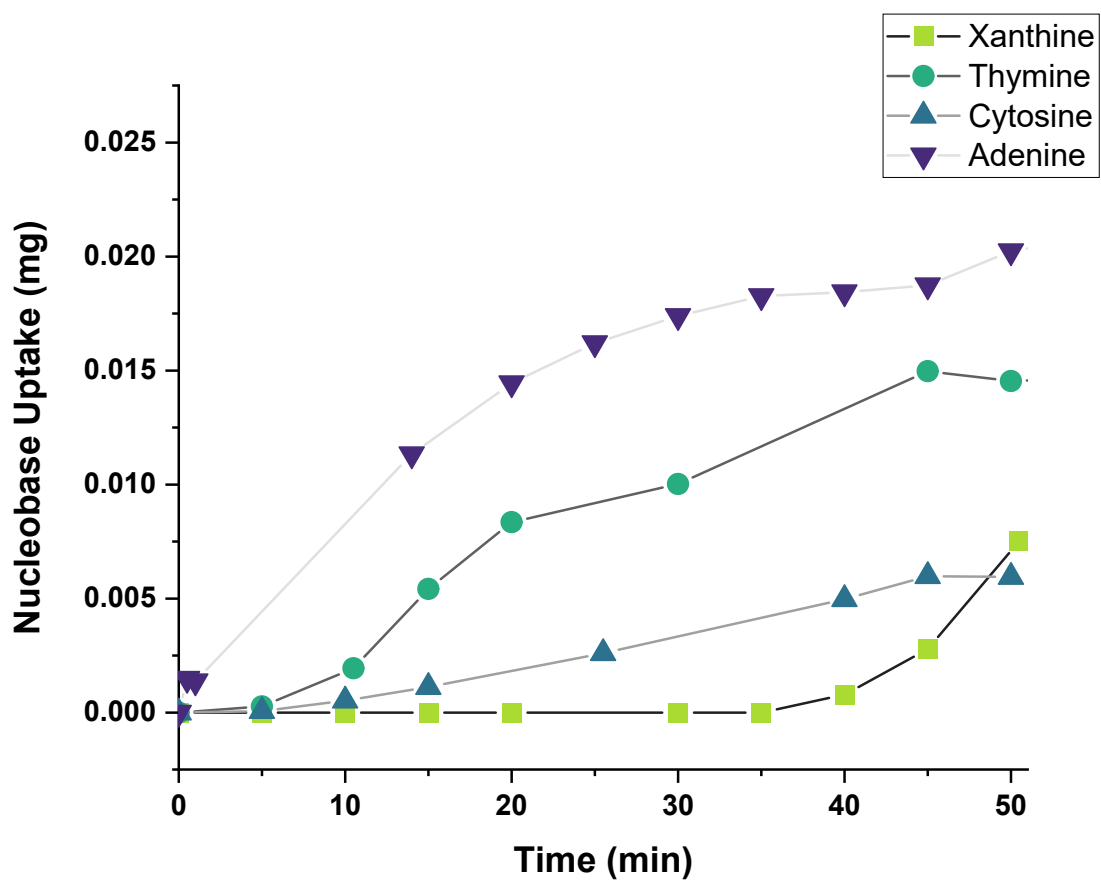
**Table S2.** Median pore size of resins using CO<sub>2</sub> BET



**Figure S4:** DOX calibration plot using UV-Vis Spectroscopy



**Figure S5:** Elution of Adenine from A-PMAEG over 20 minutes



**Figure S6:** Xanthine, Adenine, Cytosine, and Thymine capture using X-R1, A-R1, C-R1, and T-R1, respectively

<b>Time</b>	<b>20mg A-PMAEG (mg DOX captured/g of resin)</b>	<b>Std. Dev</b>	<b>50mg A-PMAEG (mg DOX captured/g of resin)</b>	<b>Std. Dev</b>	<b>100 mg A-PMAEG (mg DOX captured/g of resin)</b>	<b>Std. Dev</b>
0	0.00	0.00	0.00	0.00	0.00	0.00
0.5	0.51	1.22	-0.40	1.10	0.55	4.17
1	0.43	1.35	0.44	1.82	2.11	5.98
1.5	1.74	1.89	2.29	0.79	7.65	6.24
2	2.61	2.40	3.61	1.01	14.14	10.15
2.5	3.87	3.39	5.80	3.10	22.86	6.64
3	4.54	3.82	7.55	3.85	25.30	7.89
3.5	5.85	3.30	10.00	5.20	27.95	9.08
4	6.99	3.74	12.18	4.59	32.71	9.68
4.5	7.94	4.73	14.71	5.75	35.31	7.05
5	9.01	4.36	16.81	6.68	35.03	10.65
5.5	10.27	3.06	19.04	6.50	46.42	10.50
6	10.94	2.99	19.13	5.56	47.79	10.77
6.5	12.68	2.43	21.26	7.86	50.37	9.59
7	13.40	3.18	22.64	7.74	52.00	9.69
7.5	14.63	2.88	23.60	8.24	52.80	10.53
8	15.42	2.81	25.14	9.00	54.42	9.16
8.5	15.48	3.58	26.39	8.76	55.21	9.91
9	16.29	2.96	26.11	8.56	55.43	8.54
9.5	16.87	3.27	26.72	7.68	56.97	8.24
10	17.71	2.53	28.15	9.63	58.44	6.59
10.5	18.35	2.53	27.76	7.53	59.06	6.26
11	18.69	2.41	29.84	10.36	59.34	6.54
11.5	19.14	2.22	31.33	11.86	60.99	6.12
12	18.73	4.33	30.12	9.71	61.07	5.88
12.5	19.43	3.08	30.16	11.95	62.23	6.12
13	19.87	3.70	31.47	10.32	62.15	6.18
13.5	21.52	3.48	32.22	11.64	61.71	5.70
14	21.70	2.43	30.92	9.97	62.88	4.83
14.5	22.31	4.03	32.55	10.69	63.10	6.16
15	21.59	4.23	32.75	10.16	62.15	5.64
15.5	22.10	3.99	32.76	9.44	63.84	4.98
16	22.11	4.84	33.12	8.38	63.10	5.60
16.5	22.99	5.21	33.97	8.65	62.14	6.21
17	23.48	5.19	35.59	10.63	62.19	5.83
17.5	23.25	5.39	36.59	10.81	62.06	5.70
18	23.74	5.44	36.83	11.55	62.16	5.75
18.5	24.60	5.38	37.06	11.03	61.89	5.70
19	23.95	6.50	38.04	10.71	61.06	5.88
19.5	23.77	7.57	40.38	13.41	62.12	5.33
20	23.73	8.19	39.91	10.37	61.64	5.89

**Table S4.** DOX capture of 20, 50, 100 mg resin over 20 minutes