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APPENDIX

Experimental Data

Table A1 Multipoint BET surface area of poly(S/EGDMA)HIPE loaded with hydroxyapatite.

P/P0	V (cc/g)
0.0535881	2.2222
0.082907	2.5392
0.108305	2.6891
0.157620	3.0688
0.207656	3.3569
0.257682	3.5748
0.307800	3.7218

Table A2 Mechanical properties of poly(S/EGDMA)HIPE loaded with hydroxyapatite.

No.	Young's Modulus (MPa)	Compressive Strength (MPa)
1	16.71	0.86
2	18.04	0.88
3	17.95	0.85
4	17.96	0.89
5	18.06	0.84
Mean	17.74	0.86
SD	0.58	0.02

Table A3 Chemical composition of poly(S/EGDMA)HIPE loaded with hydroxyapatite from scanning electron microscope/energy dispersive using X-Ray (analysis).

Composition	Percentage (%)
Ca	59.12
P	40.88
Total	100

Table A4 UV-Absorbance of poly(S/EGDMA)HIPE loaded with hydroxyapatite modified with and without Layer-by-Layer (LbL) surface modification at wavelength 570 nm.

Effect of LbL surface modification		Absorbance (570 nm)
Uncoated	1	1.021
	2	1.084
	3	1.069
	Mean	1.058
	STD	0.033
PSS coated	1	1.142
	2	1.032
	3	1.027
	Mean	1.067
	STD	0.065
ALG coated	1	1.068
	2	1.004
	3	0.973
	Mean	1.015
	STD	0.048
GEL coated	1	0.962
	2	0.966
	3	0.950
	Mean	0.959
	STD	0.008

Table A5 UV-Absorbance of poly(S/EGDMA)HIPE loaded with hydroxyapatite modified with and without Layer-by-Layer (LbL) surface modification for cell attachment study (i.e. 1 h, 4 h, and 24 h) at wavelength 570 nm.

Effect of LbL surface modification on cell attachment		1 h	4 h	24 h
Uncoated	1	0.116	- 0.110	0.287
	2	0.137	0.111	0.248
	3	0.142	0.115	0.269
	Mean	0.132	0.112	0.268
	STD	0.014	0.003	0.020
PSS coated	1	0.141	0.151	0.369
	2	0.136	0.156	0.384
	3	0.141	0.168	0.359
	Mean	0.139	0.158	0.371
	STD	0.003	0.009	0.013
ALG coated	1	0.107	0.091	0.216
	2	0.108	0.092	0.23
	3	0.109	0.101	0.22
	Mean	0.108	0.095	0.222
	STD	0.001	0.006	0.007
GEL coated	1	0.106	0.055	0.125
	2	0.128	0.074	0.112
	3	0.099	0.065	0.100
	Mean	0.111	0.065	0.112
	STD	0.015	0.010	0.013

Table A6 UV-Absorbance of poly(S/EGDMA)HIPE loaded with hydroxyapatite modified with and without Layer-by-Layer (LbL) surface modification for cell proliferation study (i.e. 4 h, 1 day, 3 days, and 7 days) at wavelength 570 nm.

Effect of LbL surface modification on cell proliferation		4 h	1 day	3 days	7 days
Uncoated	1	0.110	0.287	0.269	0.530
	2	0.111	0.248	0.287	0.515
	3	0.115	0.269	0.280	0.521
	Mean	0.112	0.268	0.279	0.522
	STD	0.003	0.020	0.009	0.008
PSS coated	1	0.151	0.369	0.366	0.421
	2	0.156	0.384	0.363	0.42
	3	0.168	0.359	0.361	0.421
	Mean	0.158	0.371	0.363	0.421
	STD	0.009	0.013	0.003	0.001
ALG coated	1	0.091	0.216	0.117	0.175
	2	0.092	0.23	0.127	0.159
	3	0.101	0.22	0.107	0.150
	Mean	0.095	0.222	0.117	0.161
	STD	0.006	0.007	0.010	0.013
GEL coated	1	0.055	0.125	0.125	0.094
	2	0.074	0.112	0.129	0.088
	3	0.065	0.100	0.116	0.082
	Mean	0.065	0.112	0.123	0.088
	STD	0.010	0.013	0.007	0.006

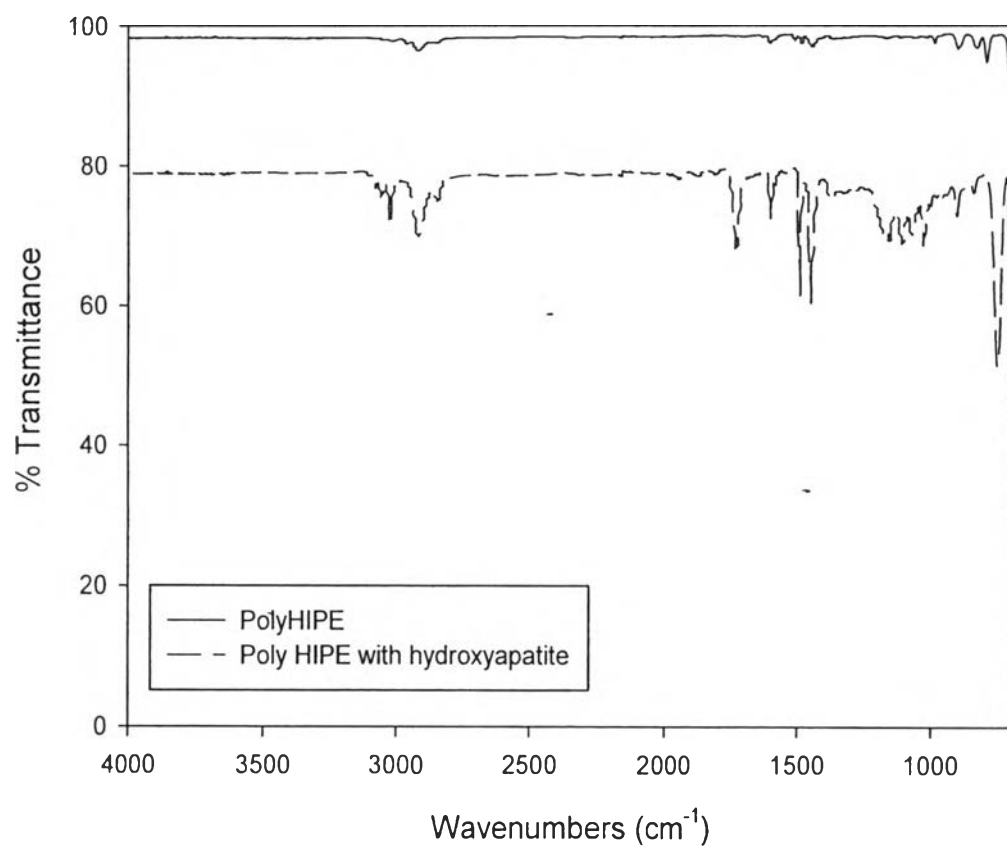


Figure A1 FTIR spectrum of poly(S/EGDMA) with and without hydroxyapatite.

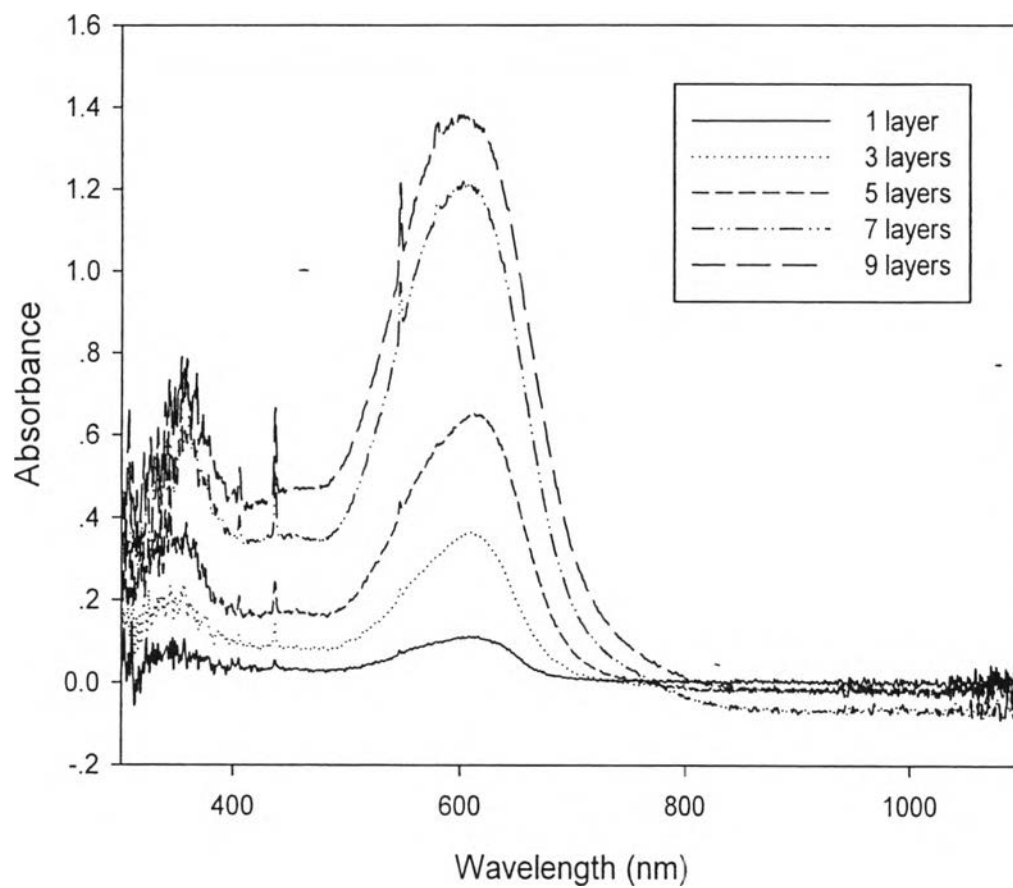


Figure A2 UV spectrum of poly(S/EGDMA) loaded with hydroxyapatite coated surface with Indigo dye at 1, 3, 5, 7, and 9 layers.

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Presentation

1. Noulta, K.; Pakeyangkoon, P.; Malakul, P.; Dubas, S and Nithitanakul, M. (2014, February 27-28) Coating of polyelectrolyte multilayer thin films on poly(S/EGDMA)HIPE loaded with hydroxyapatite as a scaffold for tissue engineering application. Poster presented at ICCEE 2014 : International Conference on Chemical and Environmental Engineering. Barcelona, Spain.
1. Noulta, K.; Pakeyangkoon, P.; Malakul, P.; Dubas, S and Nithitanakul, M. (2014, April 22) Enhancement of cell adhesion on poly(S/EGDMA)HIPE loaded with hydroxyapatite by polyelectrolyte multilayer thin films technique. Poster presented at the 5th Research Symposium on Petrochemical and Materials Technology and the 20th PPC Symposium on Petroleum, Petrochemicals, and Polymers. Bangkok, Thailand.