Electronic Supplementary Information

Tailored Honeycomb-like Polymeric Films Based on Amphiphilic Poly(urea/malonamide) Dendrons

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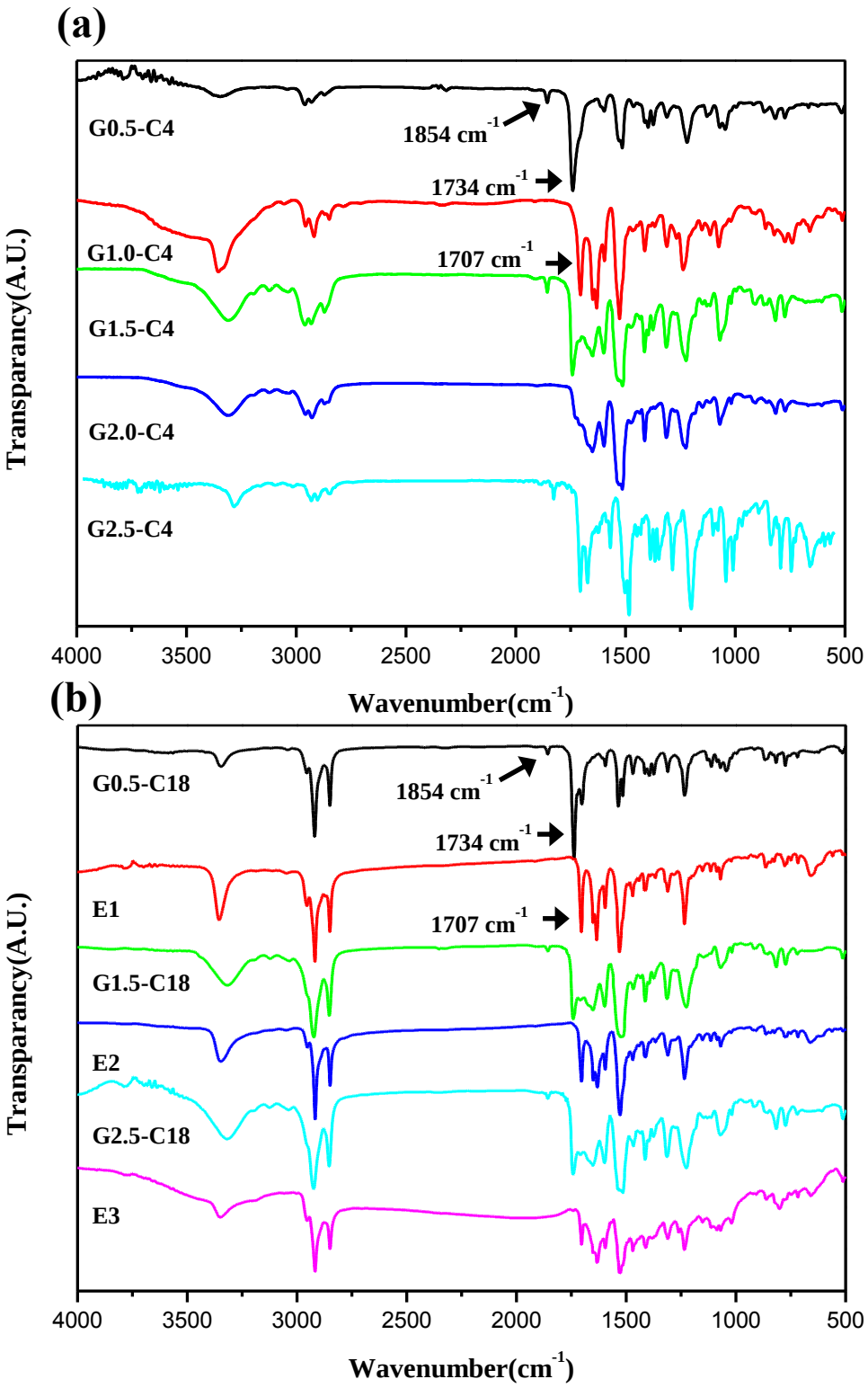

(a)
G0.5-C4
1854 cm-1
1734 cm-1
G1.0-C4
1707 cm-1
G1.5-C4
G2.0-C4
G2.5-C4
Transparancy(A.U.)
4000
3500
3000
2500
2000
1500
1000
500
Wavenumber(cm-1)
(b)
G0.5-C18
1854 cm-1
1734 cm-1
E1
1707 cm-1
G1.5-C18
E2
G2.5-C18
E3
Transparancy(A.U.)
4000
3500
3000
2500
2000
1500
1000
500
Wavenumber(cm-1)

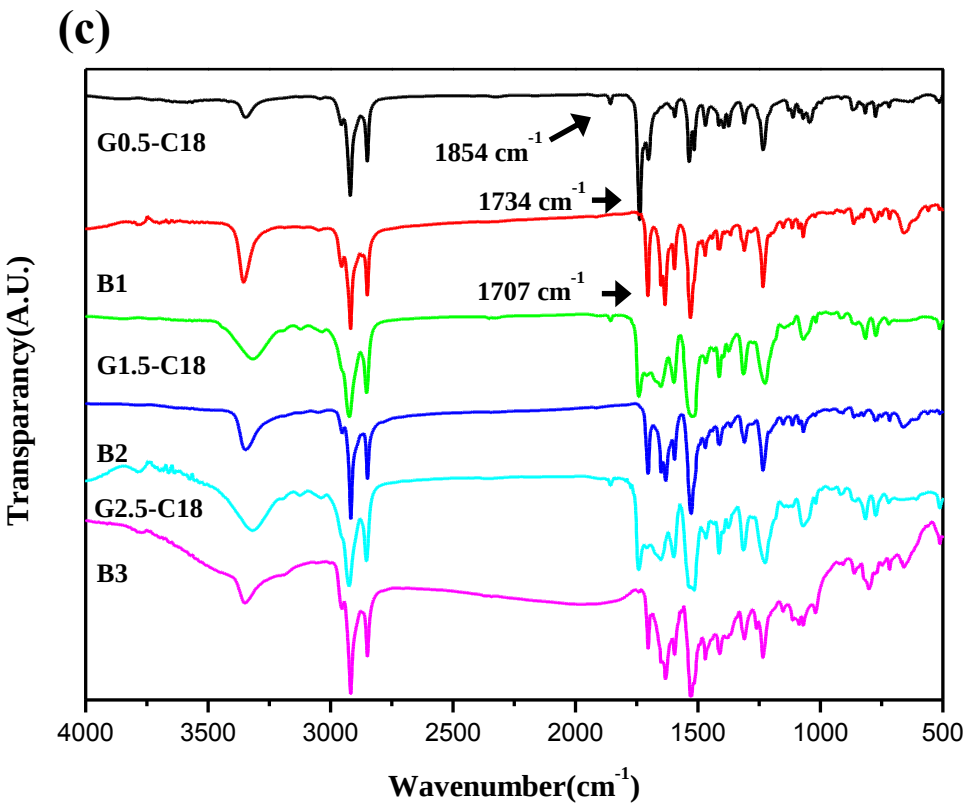
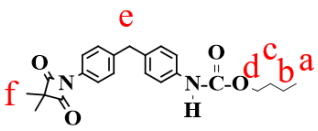


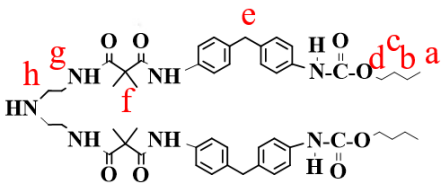
Fig. S1 Infrared spectra of (a) poly(urea/malonamide) dendrons, (b) E-series amphiphilic poly(urea/malonamide) dendrons, and (c) B-series amphiphilic poly(urea/malonamide) dendrons.

G0.5-C4


e
f
d
c
b
a

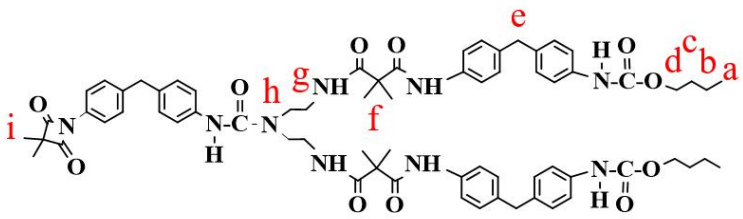
f
a
Ar-H
e
d
-NH-
c
b
10
9
8
7
6
5
4
3
2
1
0 ppm

G1.0-C4


e
h
g
f
d
c
b
a

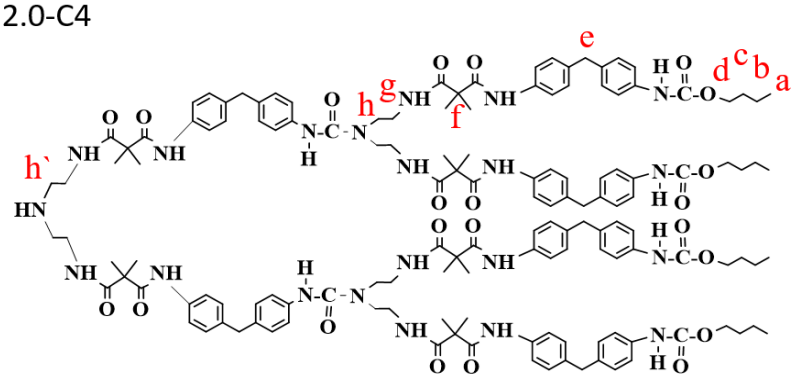
a
f
Ar-H
e
d
g
h
-NH-
-NH-
-NH-
c
b
10
9
8
7
6
5
4
3
2
1
0 ppm

G1.5-C4


e
d c b a
i
h
g NH
NH
f
N-C-O
NH
NH
N-C-O

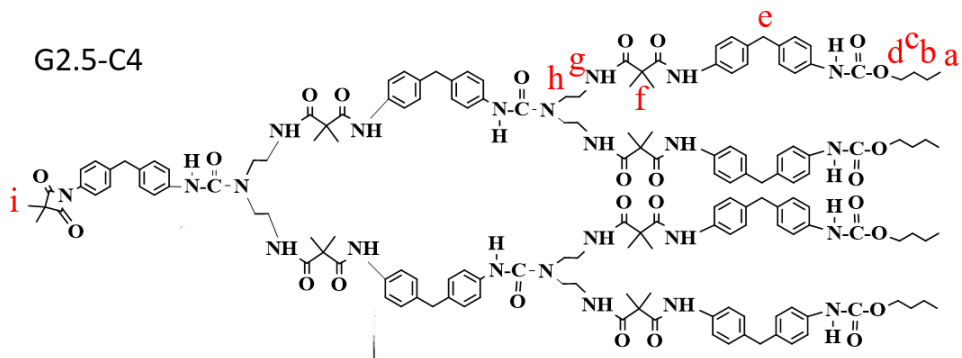
f
i
a
e
d
Ar-H
g+h
c
b
-NH-
-NH-
-NH-
10
9
8
7
6
5
4
3
2
1
0 ppm

G2.0-C4


e
d c b a
h
g NH
NH
f
h`
HN
NH
NH
N-C-O

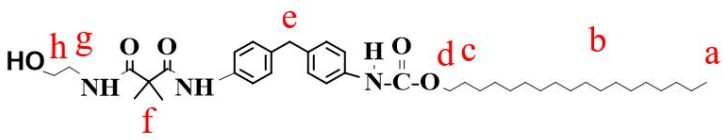
f
a
Ar-H
e
d
g+h
c
b
h`
-NH-
-NH-
-NH-
10
9
8
7
6
5
4
3
2
1
0 ppm

G2.5-C4


e
h
g
f
d
c
b
a
i

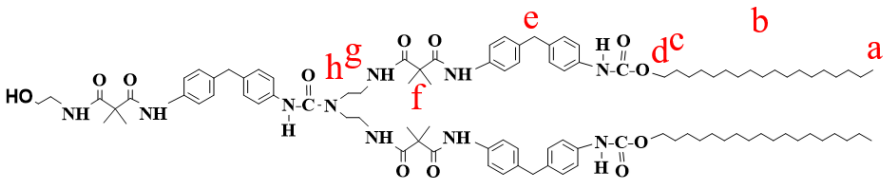
f
i
a
c
Ar-H
e
d
g+h
b
-NH-
-NH-
-NH-
10
9
8
7
6
5
4
3
2
1
0 ppm

E1


HO
h
g
e
d
c
b
a
f

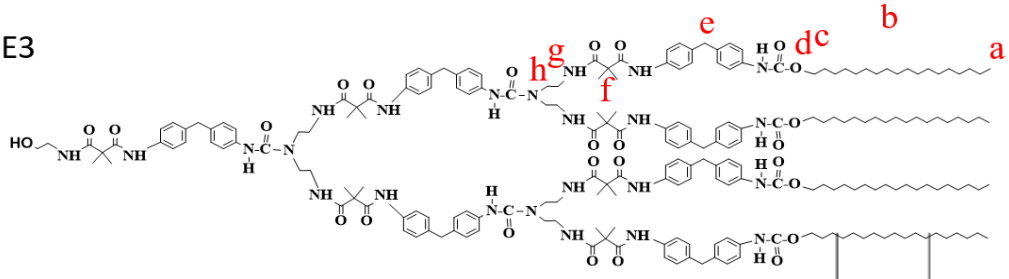
b
Ar-H
e
f
a
d
-NH-
-NH-
-NH-
g
h
c
10
9
8
7
6
5
4
3
2
1
0 ppm

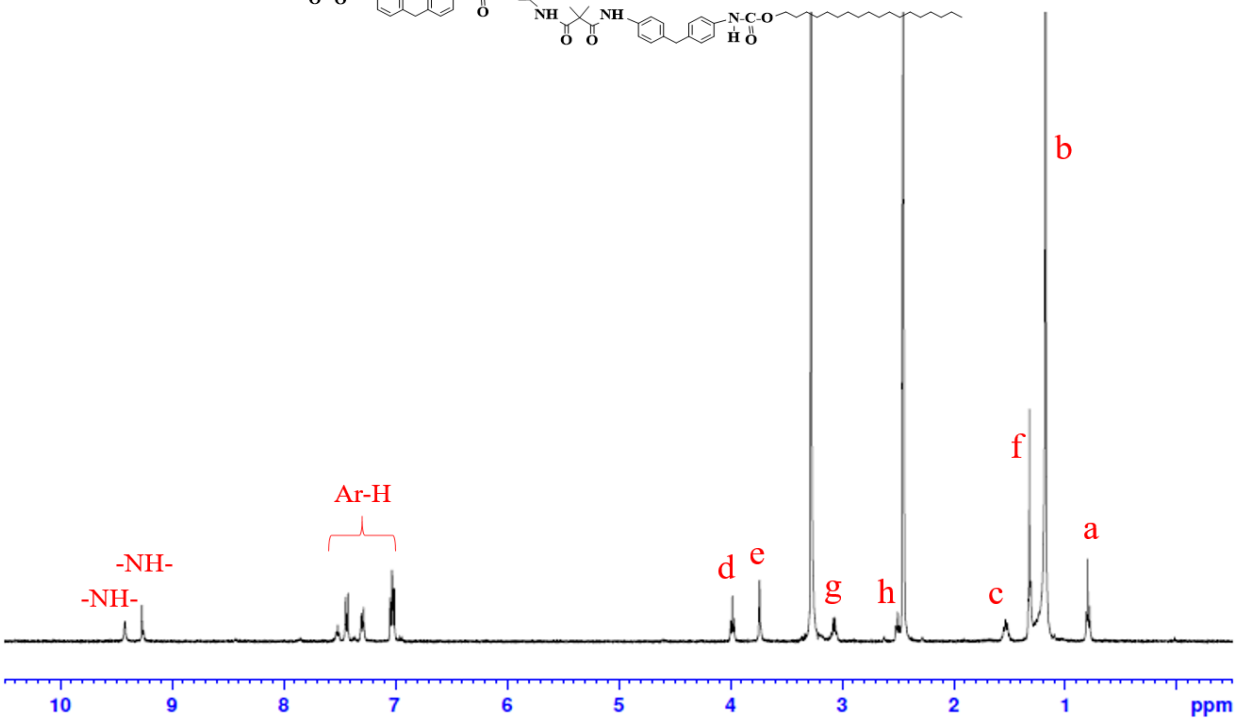
E2


HO
NH
NH
N-C-N
H
O
h
g
NH
NH
f
e
d
c
b
a
N-C-O
H
O

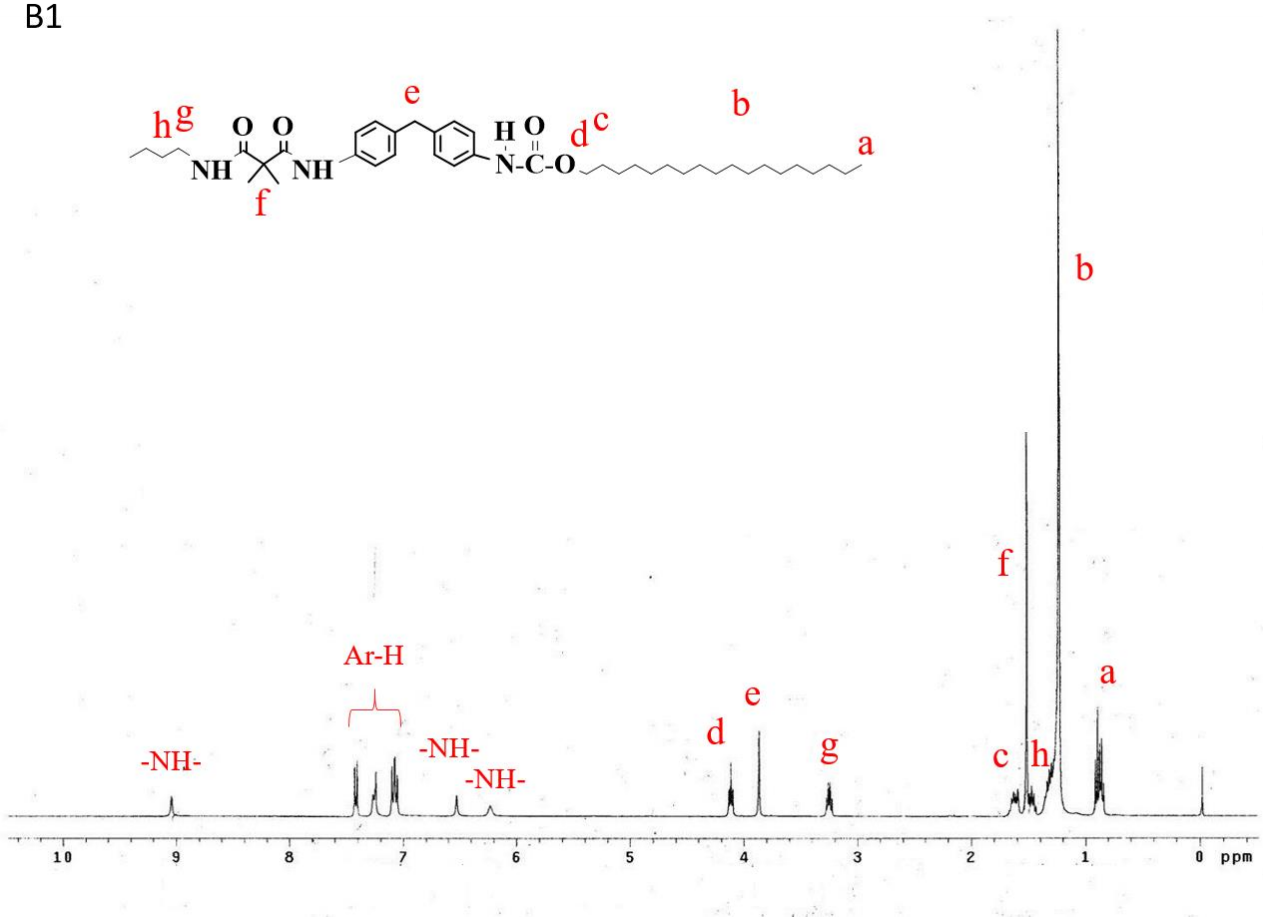
-NH-
Ar-H
-NH-
-NH-
d
e
g
h
c
f
b
a
10
9
8
7
6
5
4
3
2
1
0
ppm

E3

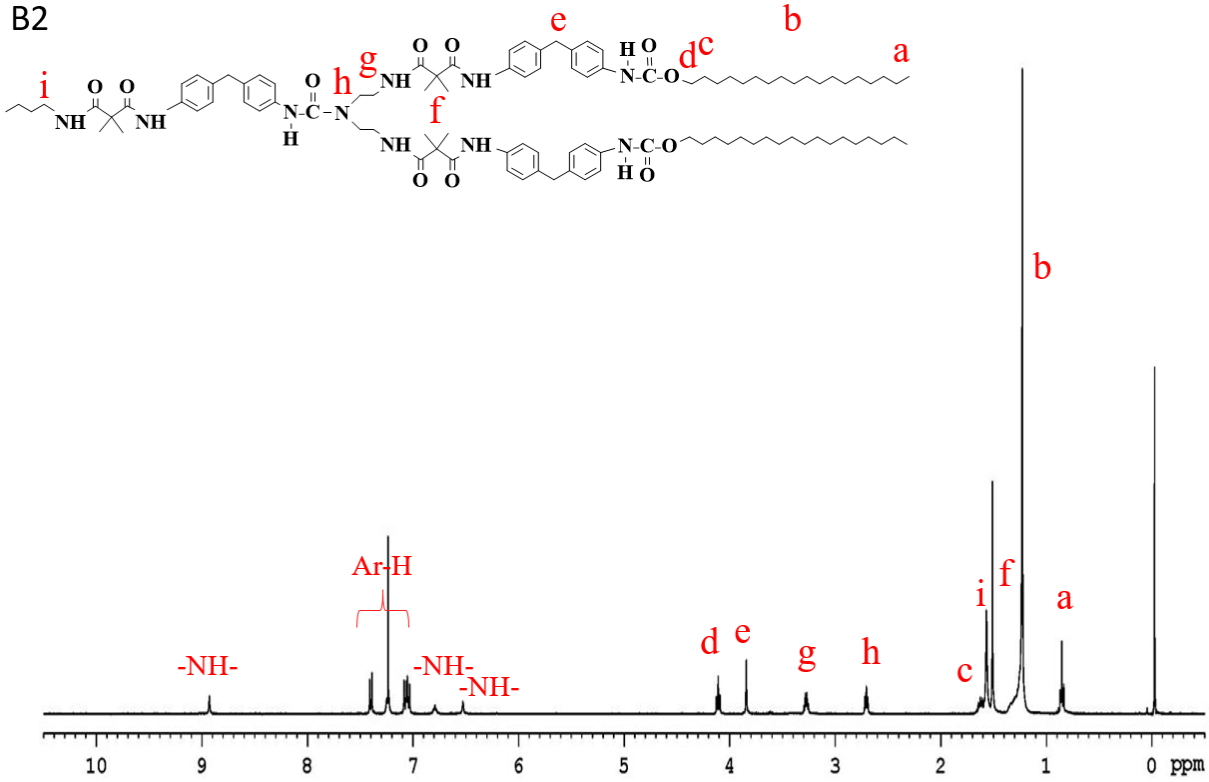

HO
NH
NH
N-C-N
H
O
h
g
NH
NH
f
e
d
c
b
a
N-C-O
H
O


-NH-
-NH-
Ar-H
d
e
g
h
c
f
b
a
10
9
8
7
6
5
4
3
2
1
ppm

B1


h g
e
b
d c
a
f
NH
NH
N-C-O
b
f
Ar-H
a
e
d
g
-NH-
-NH-
-NH-
c h
10
9
8
7
6
5
4
3
2
1
0 ppm

B2


i
h
g
e
b
d c
a
f
NH
NH
N-C-O
b
Ar-H
i
f
a
d
e
g
h
c
-NH-
-NH-
-NH-
10
9
8
7
6
5
4
3
2
1
0 ppm

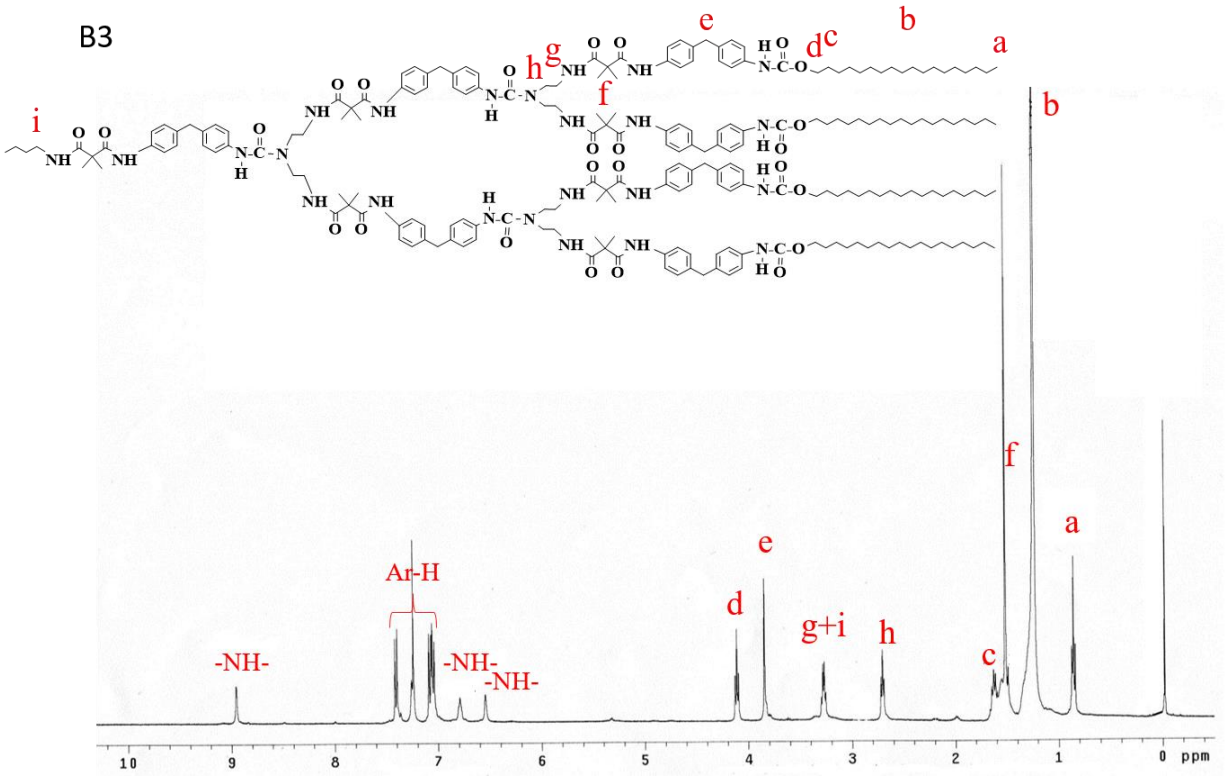


Fig. S2 ^{1}H NMR spectra of poly(urea/malonamide) dendrons.

Table S1 Solubility of poly(urea/malonamide) dendrons.

Sample	Toluene	Chloroform	THF	Acetone	EA	DMSO	Ethanol	Methanol
G0.5-C4	+	+	+	+	+	+	+	+
G1.0-C4	-	+	+-	+	-	+	+-	+-
G1.5-C4	-	+	+	+	+	+	+	+
G2.0-C4	-	+	+	+	+	+	+-	+-
G2.5-C4	-	+	+	+	+	+	+-	+-
B1	+-	+	+	+	+	+-	-	-
B2	-	+	+	+-	+	+-	-	-
B3	-	+	+	+-	+	+-	-	-
E1	+-	+	+	+	+-	+	+-	+-
E2	-	+	+	+-	-	+-	-	-
E3	-	+	+	+-	-	+-	-	-
A1	-	+	+	+	+	+	+-	-
A2	+-	+	+	+	+	+	-	-
A3	+	+	+	+	+	+	-	-

Qualitative solubility were determined with 10 mg of samples in 1 ml of solvent.

+: soluble at RT; +-: soluble after heating to 60 ^{o}C; -: Insoluble even at 60 ^{o}C.