FIG. 1

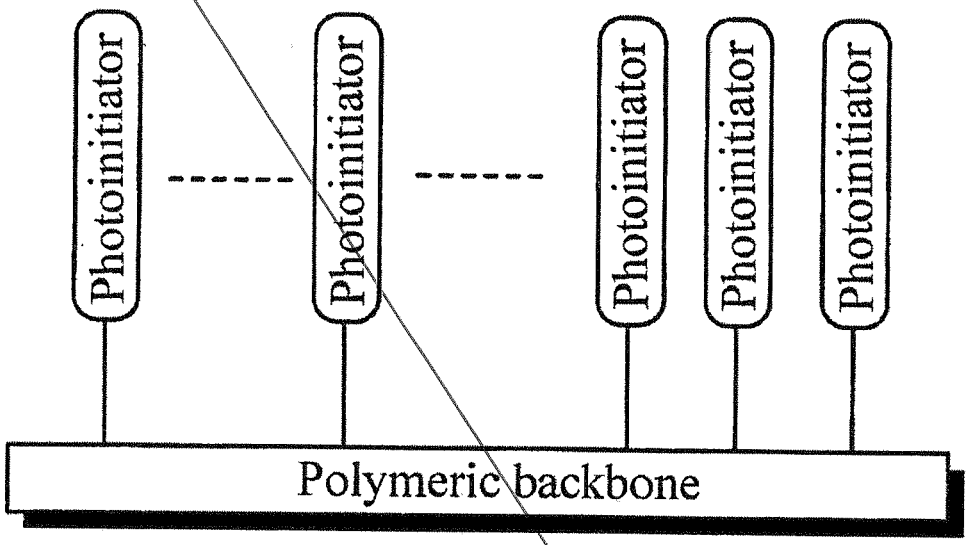

Photoinitiator
Photoinitiator
Photoinitiator
Photoinitiator
Photoinitiator
Polymeric backbone

FIG. 2

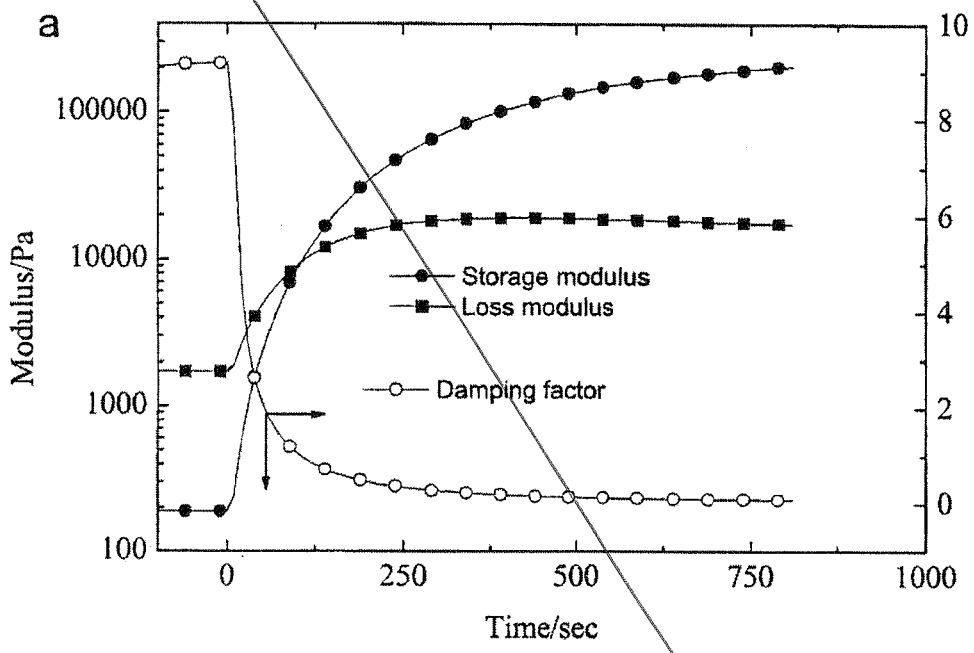

a
100000
10000
1000
100
Modulus/Pa
10
8
6
4
2
0
0
250
500
750
1000
Time/sec
Storage modulus
Loss modulus
Damping factor

FIG. 3

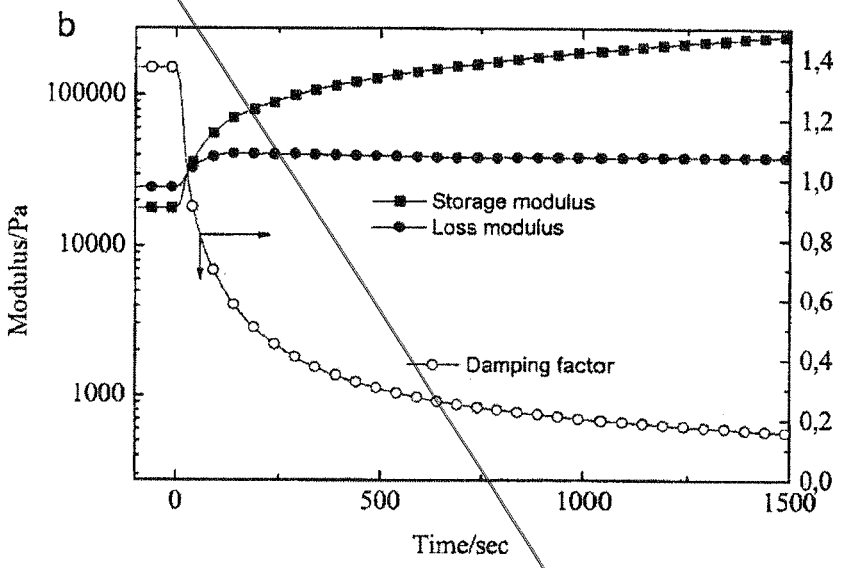

b
100000
10000
1000
Modulus/Pa
1,4
1,2
1,0
0,8
0,6
0,4
0,2
0,0
Storage modulus
Loss modulus
Damping factor
0
500
1000
1500
Time/sec

FIG. 4

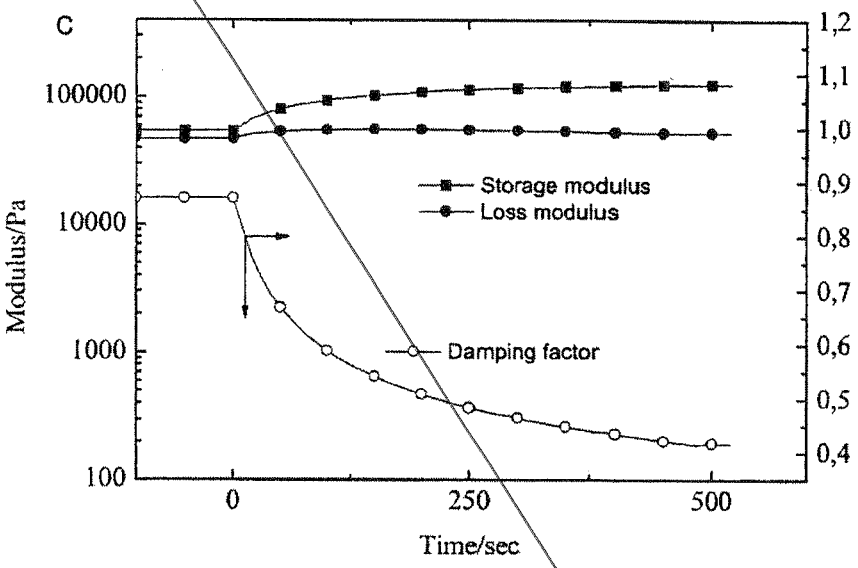

C
100000
10000
1000
100
Modulus/Pa
0
250
500
Time/sec
1,2
1,1
1,0
0,9
0,8
0,7
0,6
0,5
0,4
Storage modulus
Loss modulus
Damping factor

FIG. 5

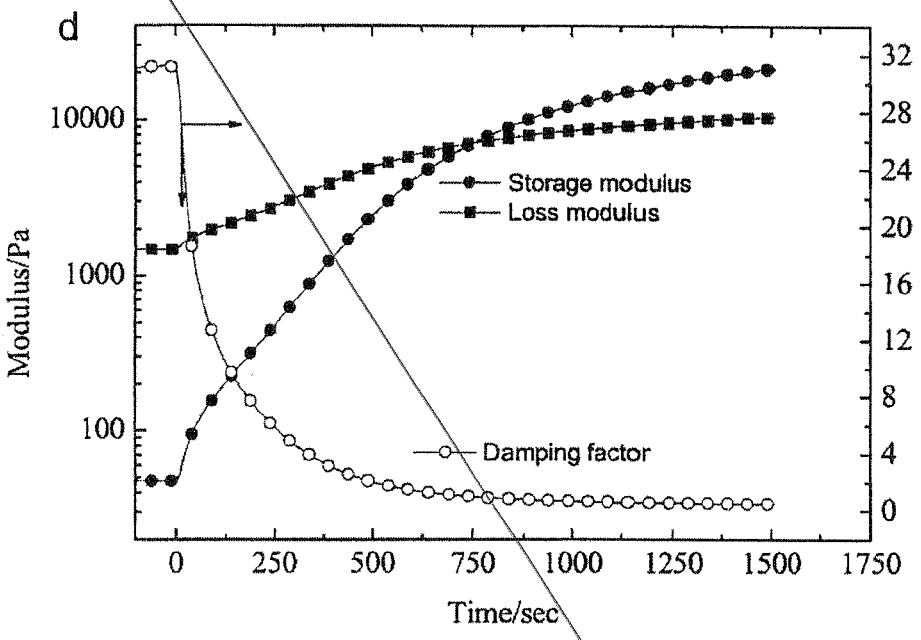

d
10000
1000
100
Modulus/Pa
Storage modulus
Loss modulus
Damping factor
32
28
24
20
16
12
8
4
0
0
250
500
750
1000
1250
1500
1750
Time/sec

FIG. 6

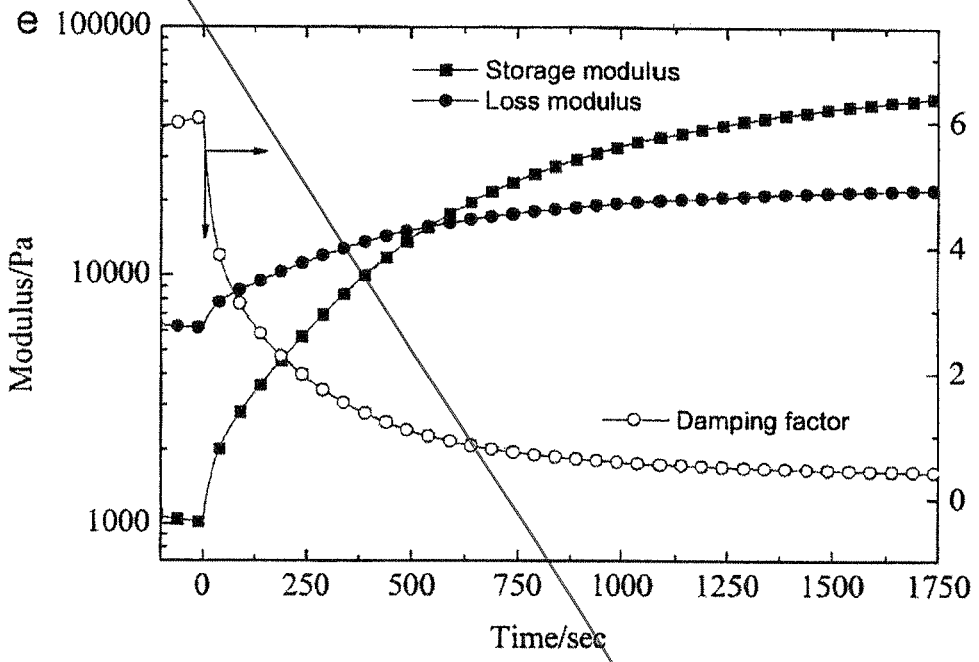

e 100000
10000
1000
Modulus/Pa
Storage modulus
Loss modulus
Damping factor
6
4
2
0
0
250
500
750
1000
1250
1500
1750
Time/sec

FIG. 7

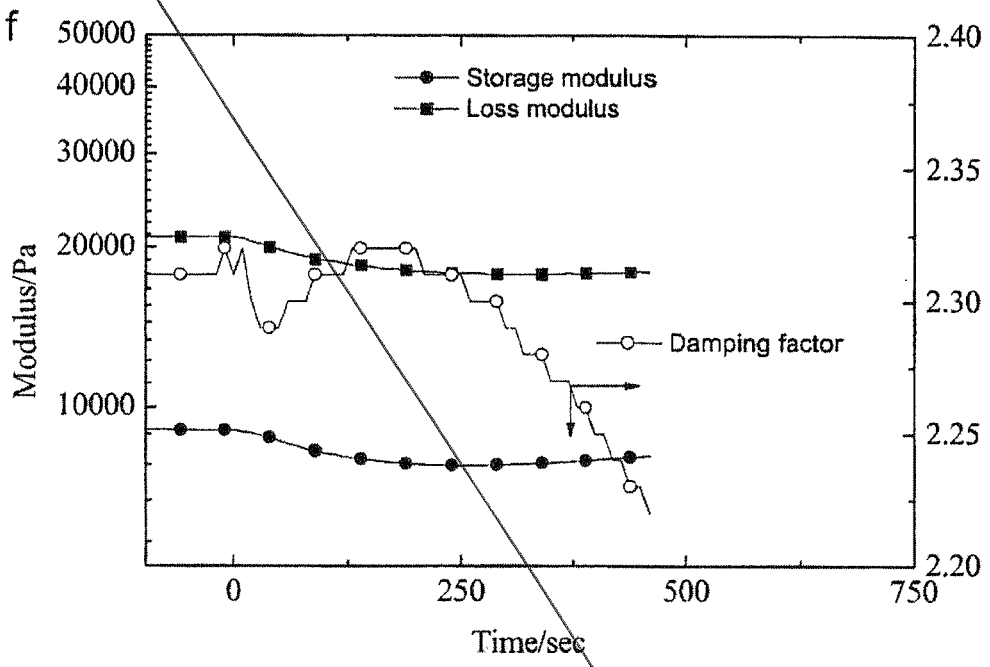

f
50000
40000
30000
20000
10000
Modulus/Pa
Storage modulus
Loss modulus
Damping factor
2.40
2.35
2.30
2.25
2.20
0
250
500
750
Time/sec

FIG. 8

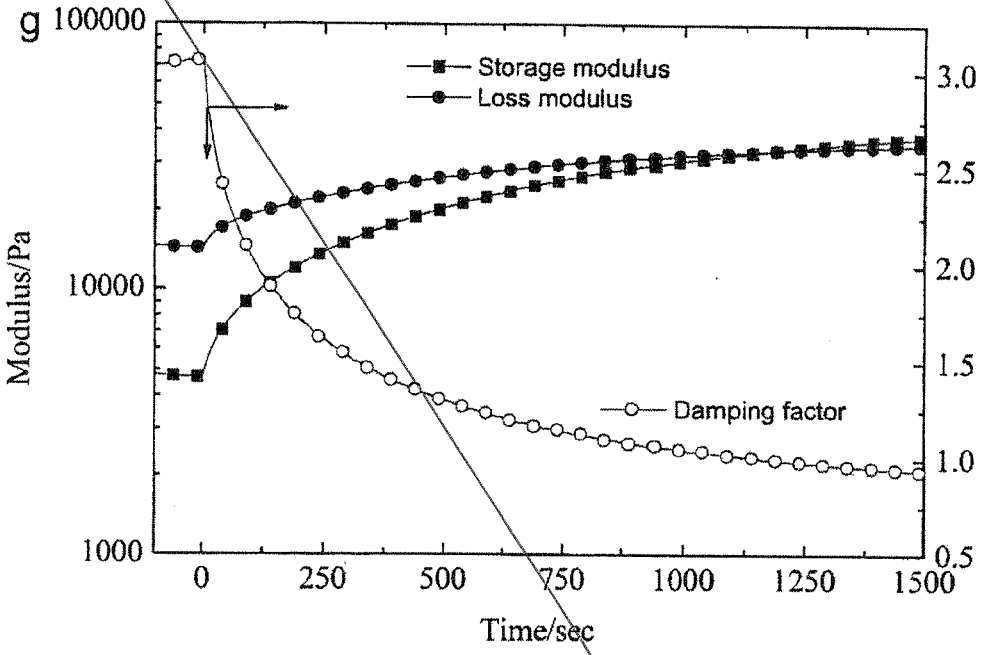

g 100000
10000
1000
Modulus/Pa
Storage modulus
Loss modulus
Damping factor
3.0
2.5
2.0
1.5
1.0
0.5
0
250
500
750
1000
1250
1500
Time/sec

FIG. 9

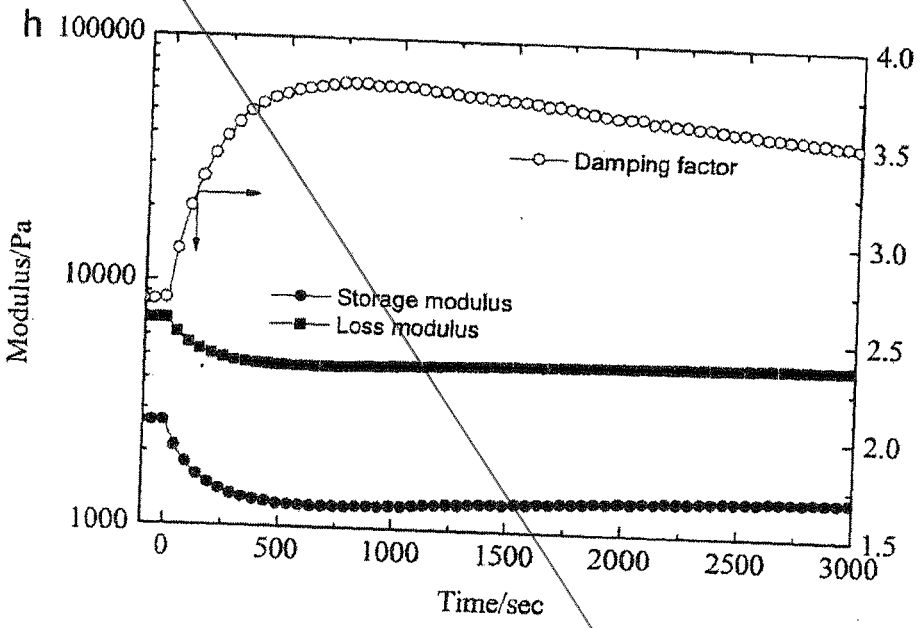

h
100000
10000
1000
Modulus/Pa
4.0
3.5
3.0
2.5
2.0
1.5
Damping factor
Storage modulus
Loss modulus
0
500
1000
1500
2000
2500
3000
Time/sec

Fig. 10

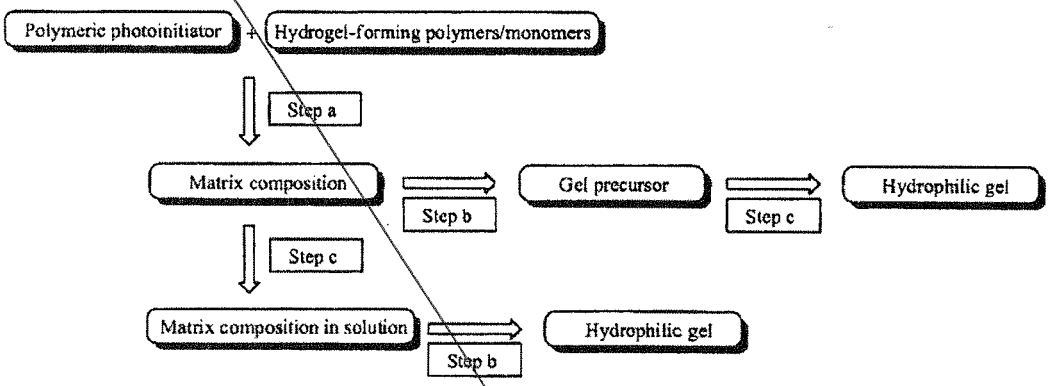

Polymeric photoinitiator
+
Hydrogel-forming polymers/monomers
Step a
Matrix composition
Step b
Gel precursor
Step c
Hydrophilic gel
Step c
Matrix composition in solution
Step b
Hydrophilic gel

FIG. 1

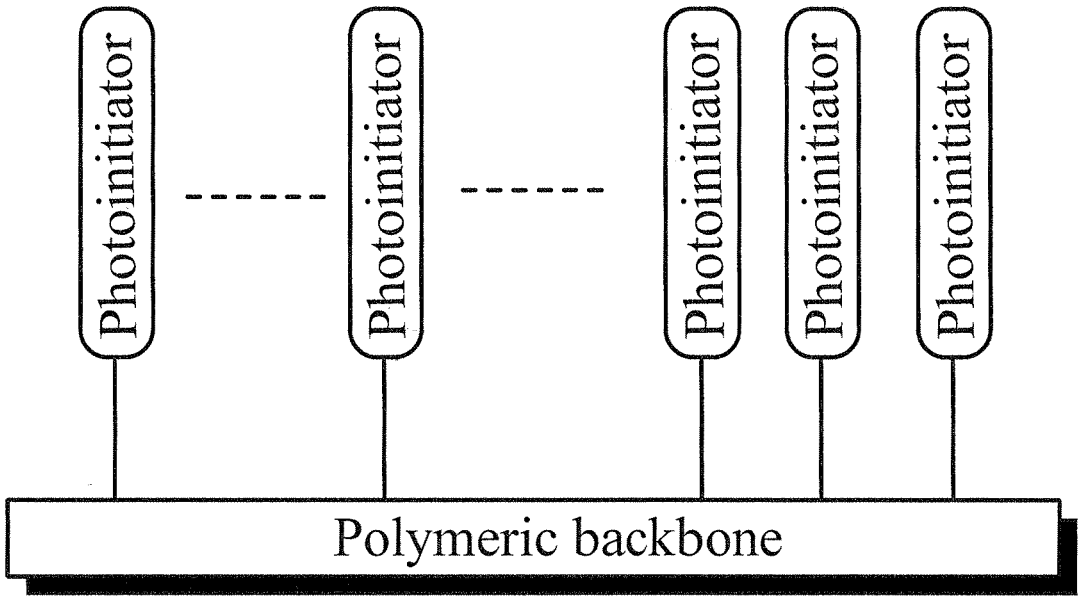

Photoinitiator
Photoinitiator
Photoinitiator
Photoinitiator
Photoinitiator
Polymeric backbone

FIG. 2

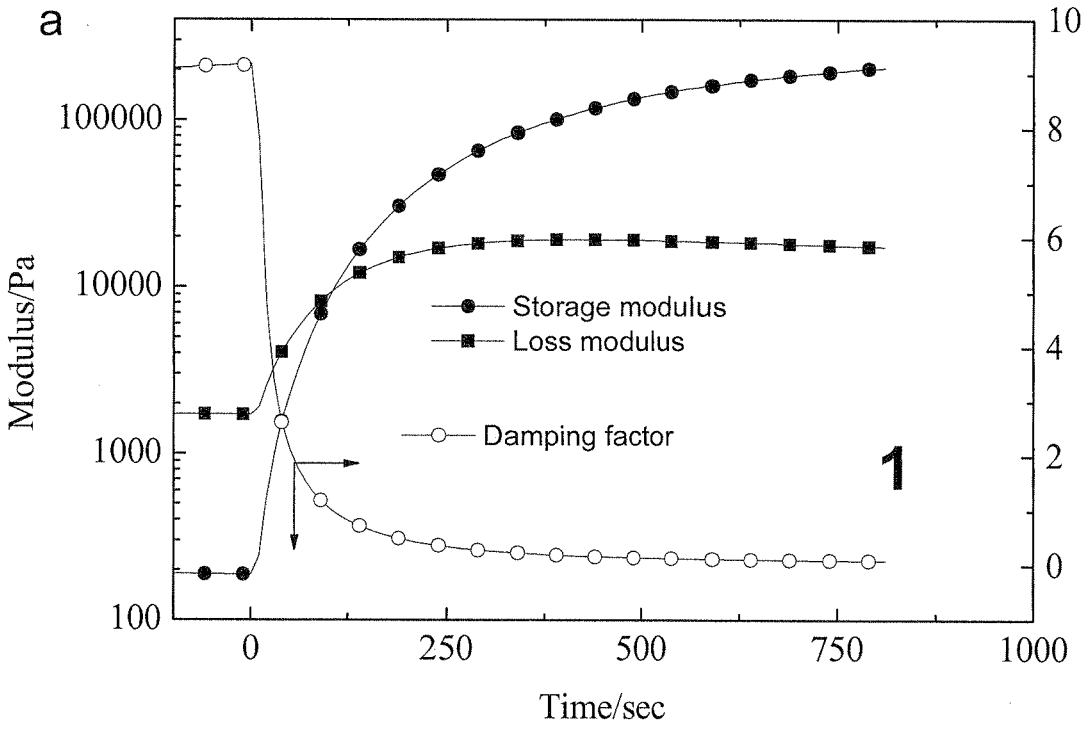

a
100000
10000
1000
100
Modulus/Pa
0
250
500
750
1000
Time/sec
10
8
6
4
2
0
Storage modulus
Loss modulus
Damping factor
1

FIG. 3

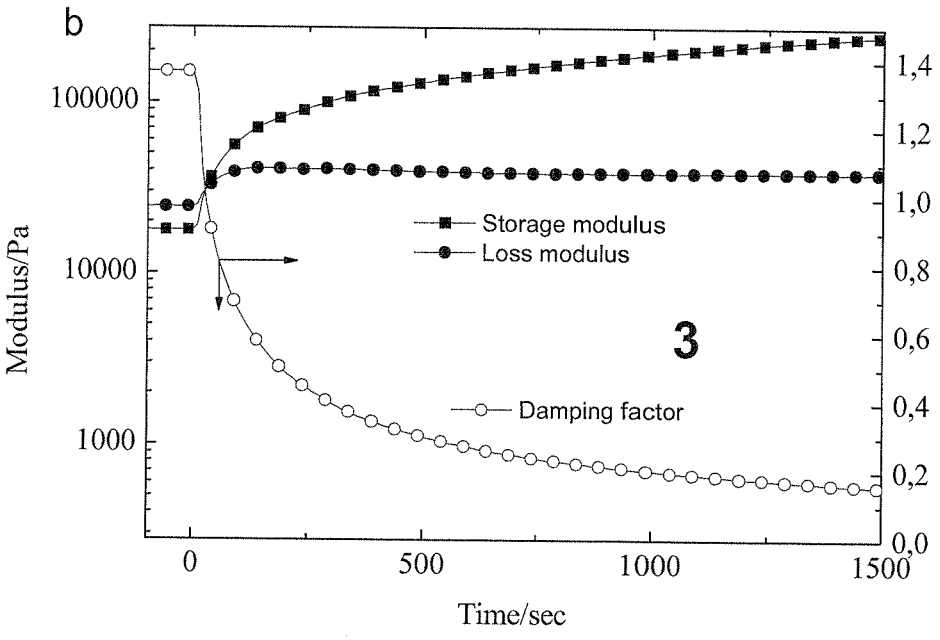

b
100000
10000
1000
Modulus/Pa
1,4
1,2
1,0
0,8
0,6
0,4
0,2
0,0
Storage modulus
Loss modulus
3
Damping factor
0
500
1000
1500
Time/sec

FIG. 4

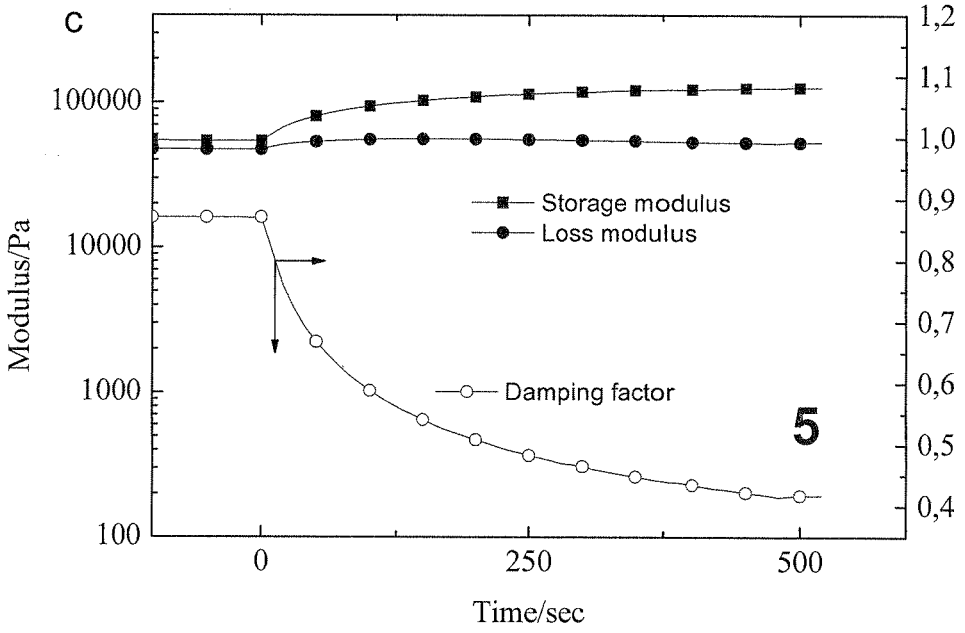

C
100000
10000
1000
100
Modulus/Pa
0
250
500
Time/sec
1,2
1,1
1,0
0,9
0,8
0,7
0,6
0,5
0,4
Storage modulus
Loss modulus
Damping factor
5

FIG. 5

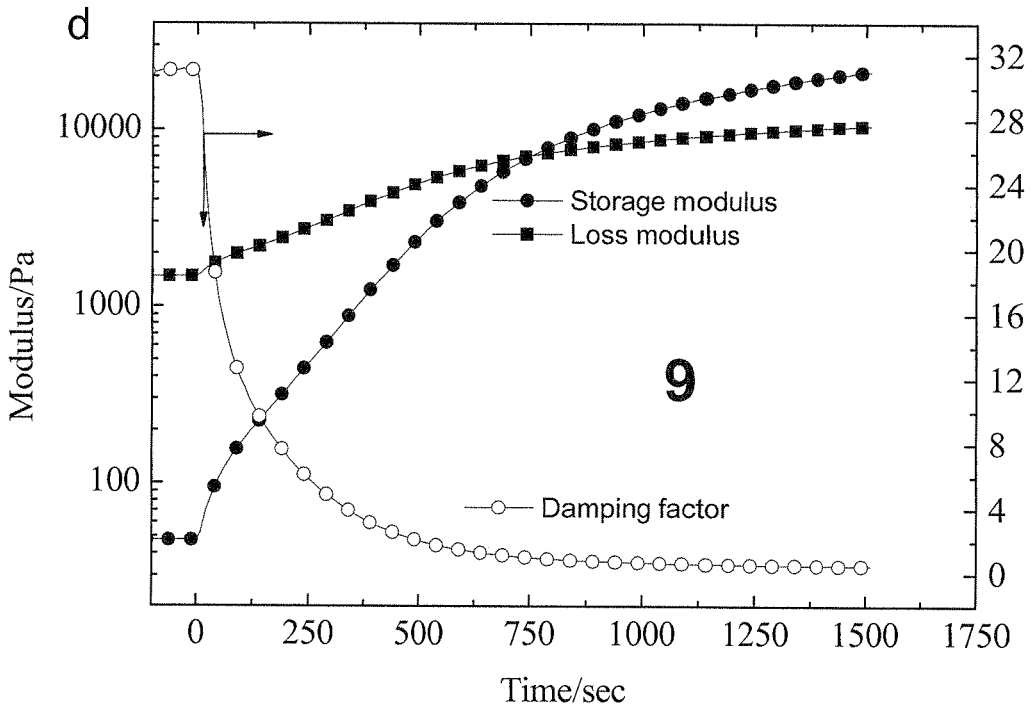

d
10000
1000
100
Modulus/Pa
32
28
24
20
16
12
8
4
0
0
250
500
750
1000
1250
1500
1750
Time/sec
Storage modulus
Loss modulus
Damping factor
9

FIG. 6

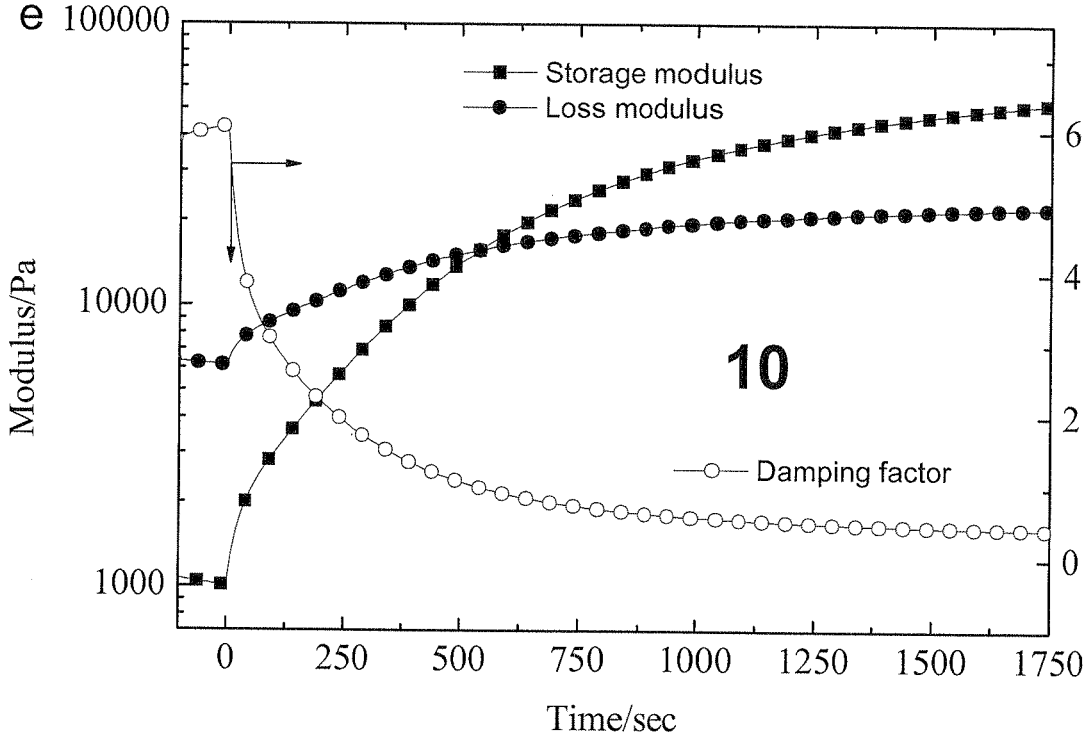

e 100000
10000
1000
Modulus/Pa
Storage modulus
Loss modulus
Damping factor
10
6
4
2
0
0
250
500
750
1000
1250
1500
1750
Time/sec

FIG. 7

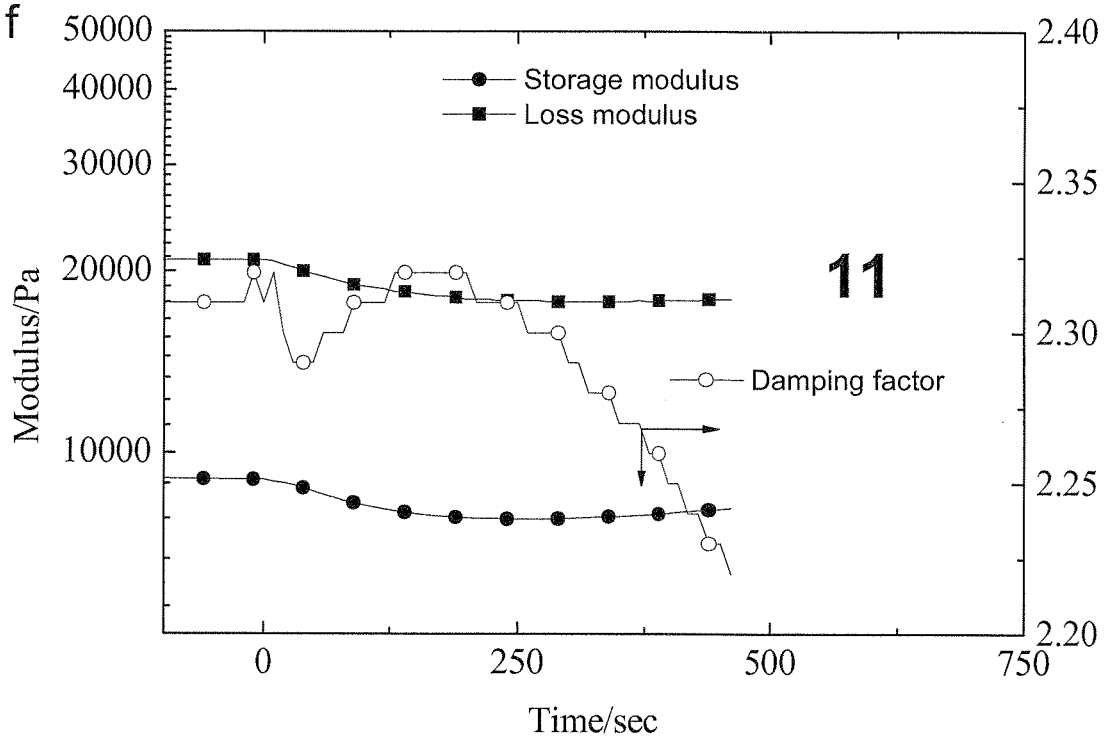

f
50000
40000
30000
20000
10000
Modulus/Pa
Storage modulus
Loss modulus
11
Damping factor
2.40
2.35
2.30
2.25
2.20
0
250
500
750
Time/sec

FIG. 8

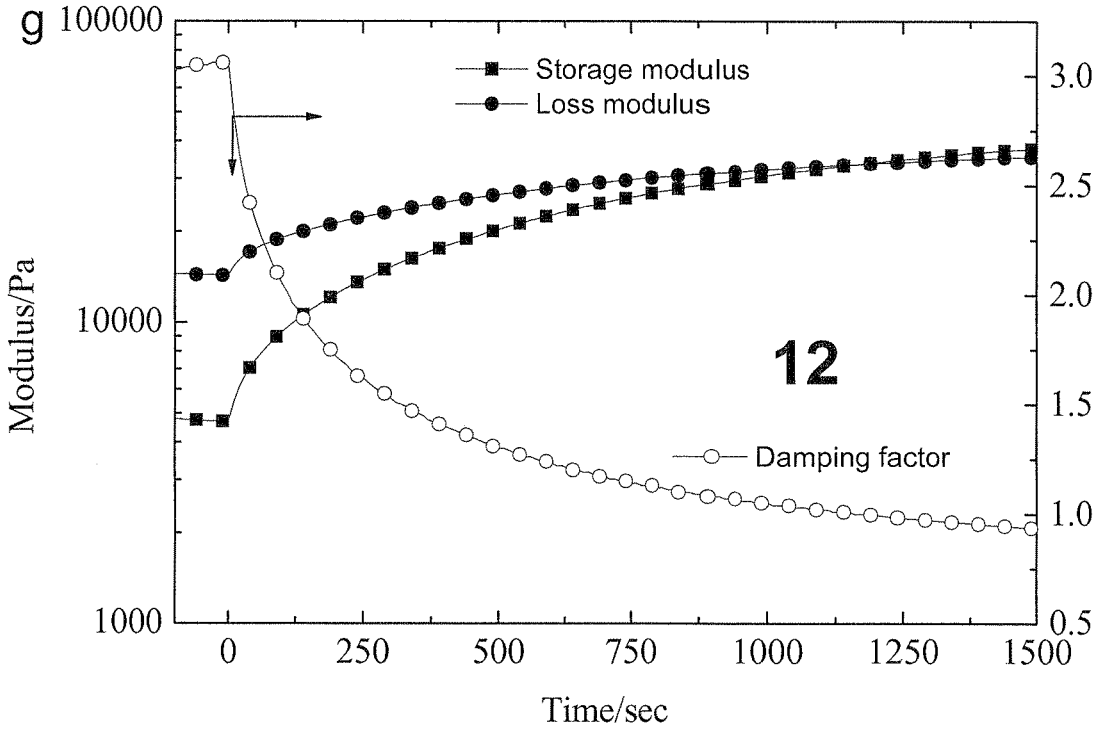
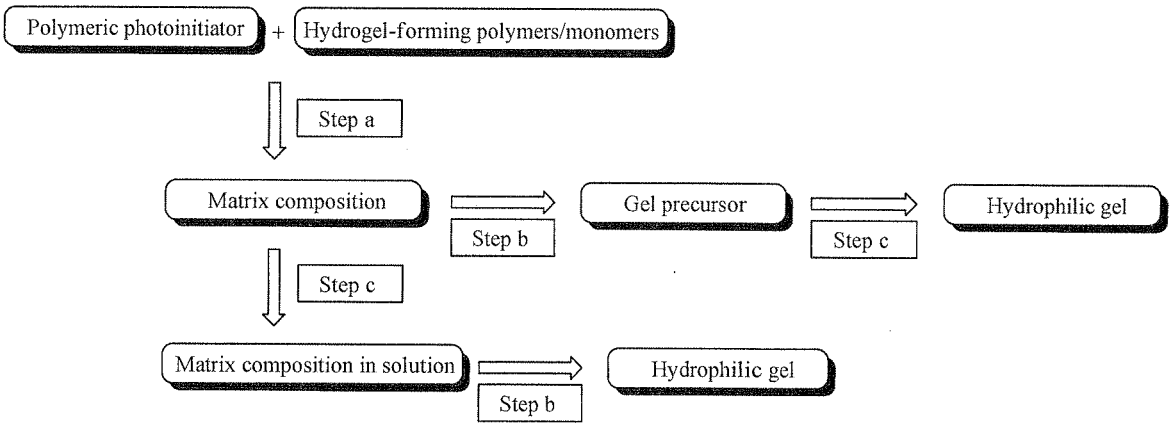

g 100000
10000
1000
Modulus/Pa
Storage modulus
Loss modulus
12
Damping factor
3.0
2.5
2.0
1.5
1.0
0.5
0
250
500
750
1000
1250
1500
Time/sec

FIG. 9


Polymeric photoinitiator
+
Hydrogel-forming polymers/monomers
Step a
Matrix composition
Step b
Gel precursor
Step c
Hydrophilic gel
Step c
Matrix composition in solution
Step b
Hydrophilic gel