

FIG. 1

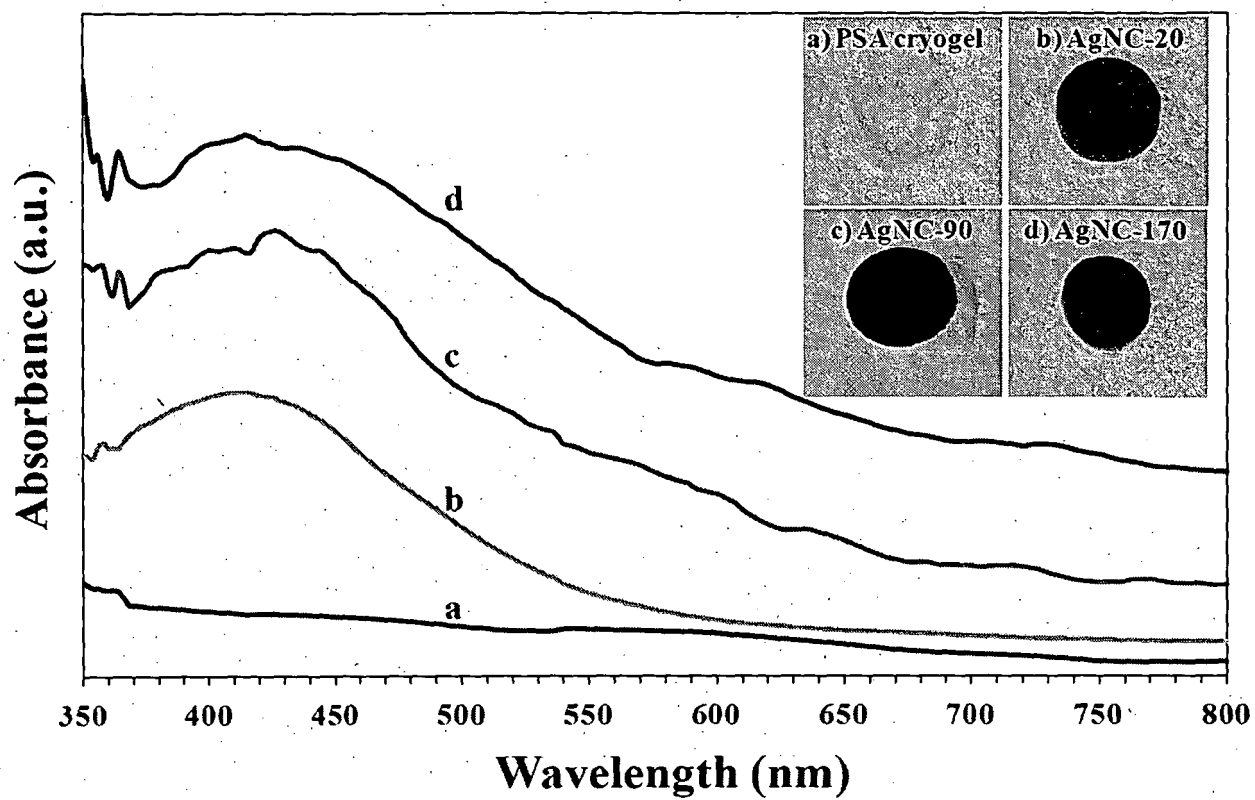


FIG. 2

Table 1 Nomenclature and summary of PSA/Ag cryogel properties

Sample	Precursor Ag ⁺ (M)	Ag content (mg g ⁻¹)	Water recovery efficiency ^b (%)	Young's modulus ^c (kPa)	Mean AgNP size ^e (nm)	Mean Ag crystallite size ^f (nm)	Total Ag loss after 24 h ^g (%)	Total Ag in squeezed water (μg L ⁻¹)
PSA gel	N.A.	N.A.	84.8 (1.0)	2.6 (0.5) ^d	N.A.	N.A.	N.A.	N.A.
AgNC-20	0.001	21.3 (0.3)	85.6 (0.8)	3.0 ^d	4.3 (1.3)	3.8	1.79 (0.02)	76.6 (0.7)
AgNC-90	0.005	88.7 (12.3)	84.3 (1.5)	3.2 (0.4) ^d	6.2 (1.7)	5.5	0.08	59.6 (0.8)
AgNC-170	0.010	166.7 (15.0)	84.5 (2.3)	3.2 (0.4) ^d	8.6 (3.8)	7.8	0.03	36.4 (1.5)

Note: N.A. = not applicable; standard deviations are shown in parentheses.

^a The equilibrium swelling degree was computed by taking the ratio of swollen mass to that of dried mass of cryogel.

^b The water recovery efficiency of cryogel was computed by taking the ratio of the difference between swollen and deswollen cryogel masses to the difference between swollen and dried cryogel masses.

^c The Young's modulus was determined from the initial linear slopes of the stress-strain curves.

^d No failure was observed at the end of the uniaxial compression test.

^e Determined from TEM images.

^f Estimated from X-ray diffractograms using Scherrer equation; full-width-at-half maximum of (111) reflection and a shape factor of 0.9 were used for computation.

^g Expressed as a percentage of total Ag in the initial PSA/Ag cryogel.

FIG. 3

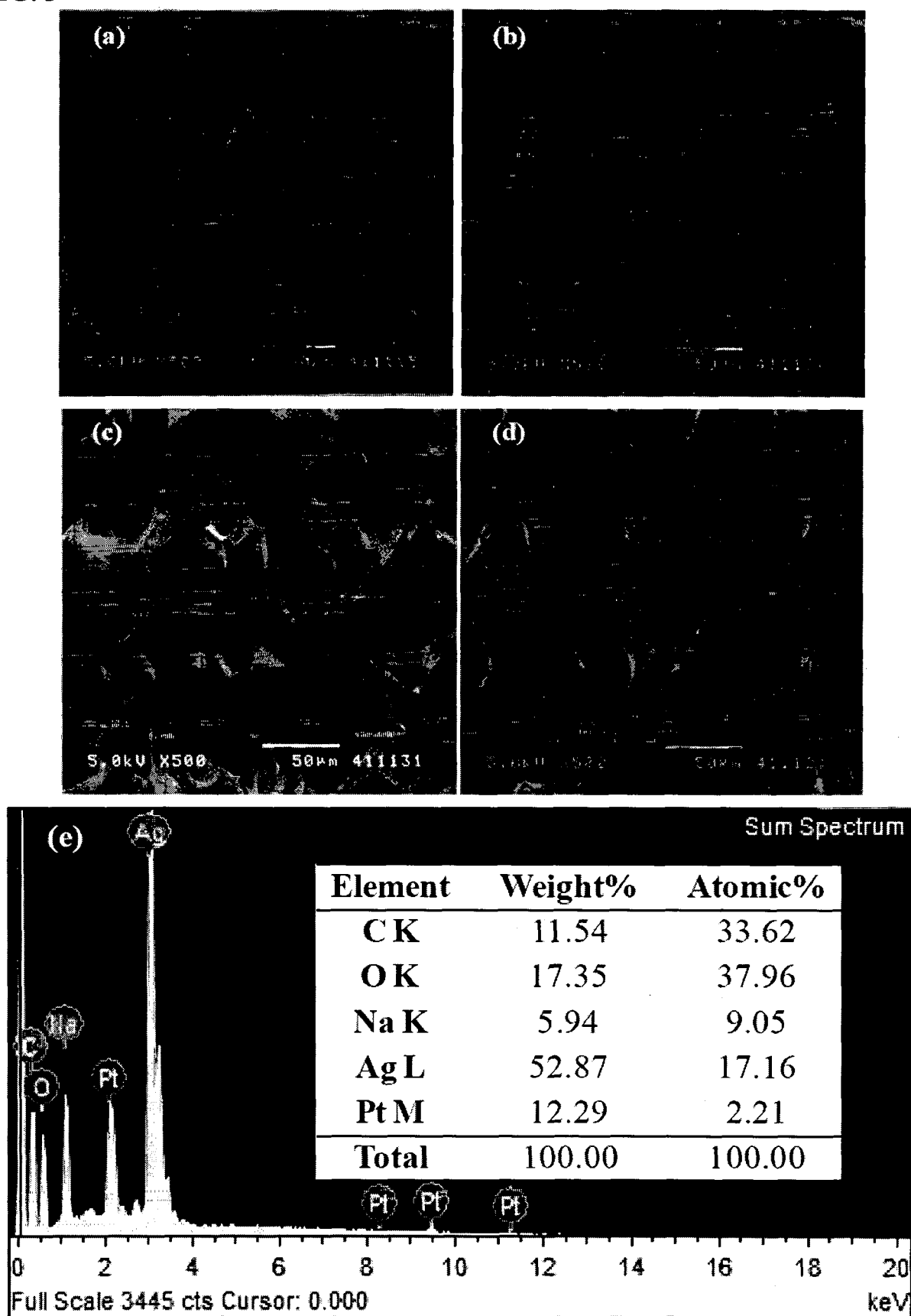


FIG. 4

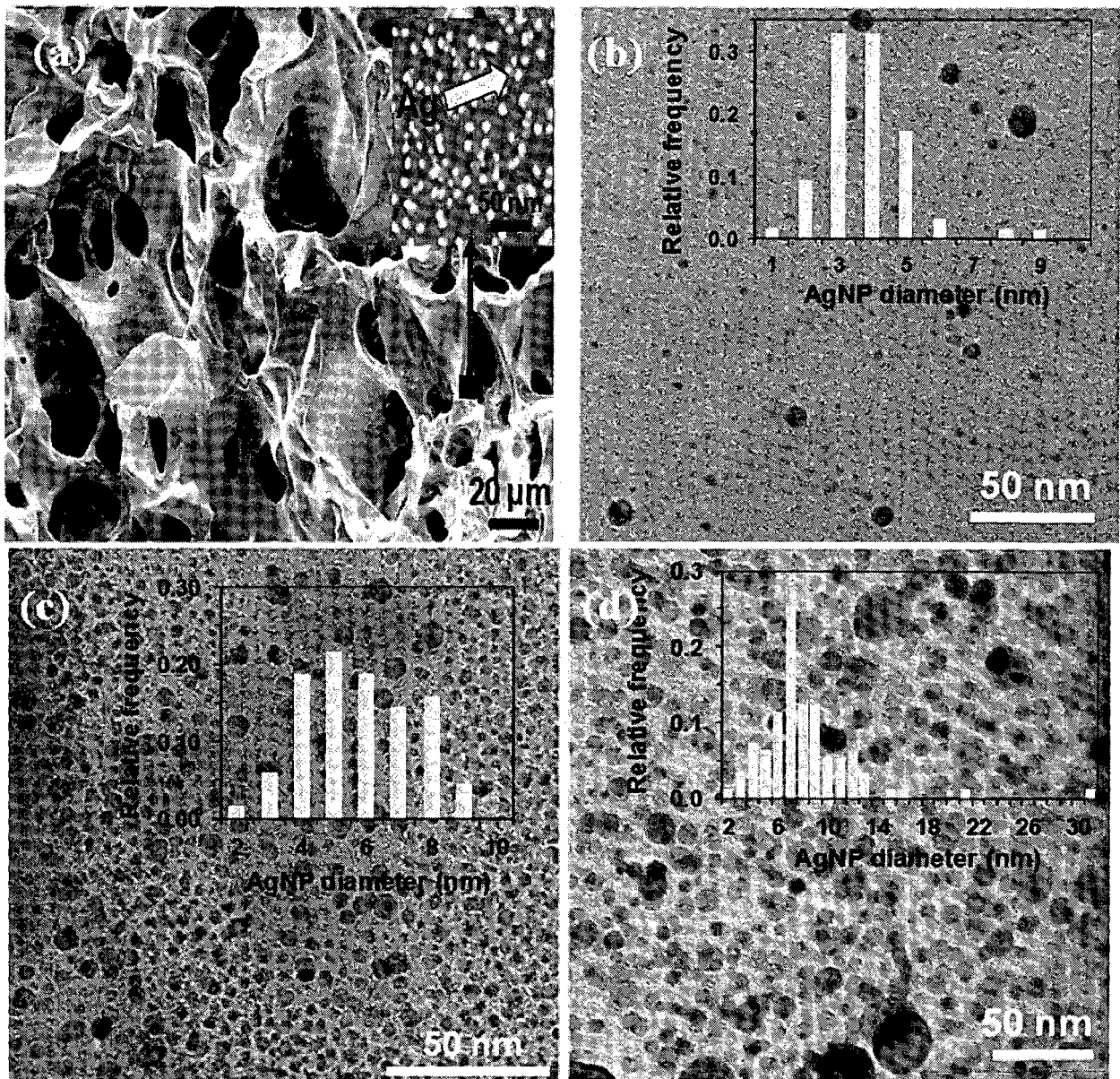
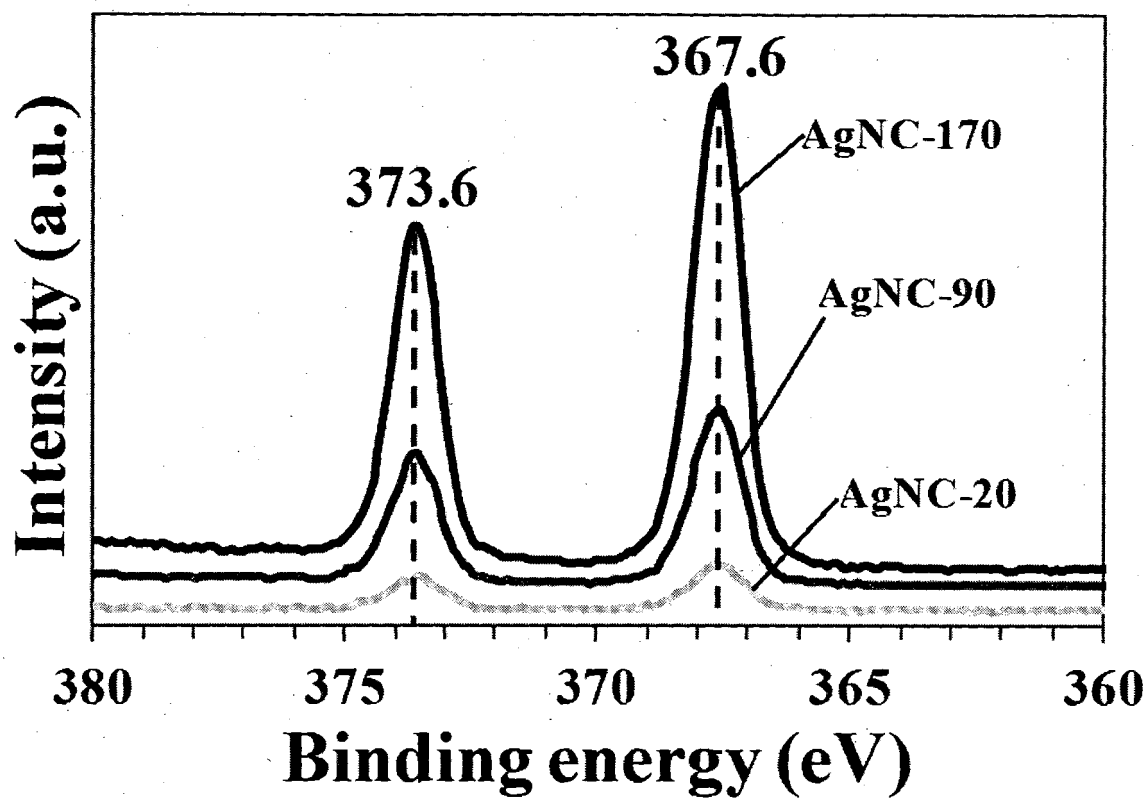


FIG. 5

(a)



(b)

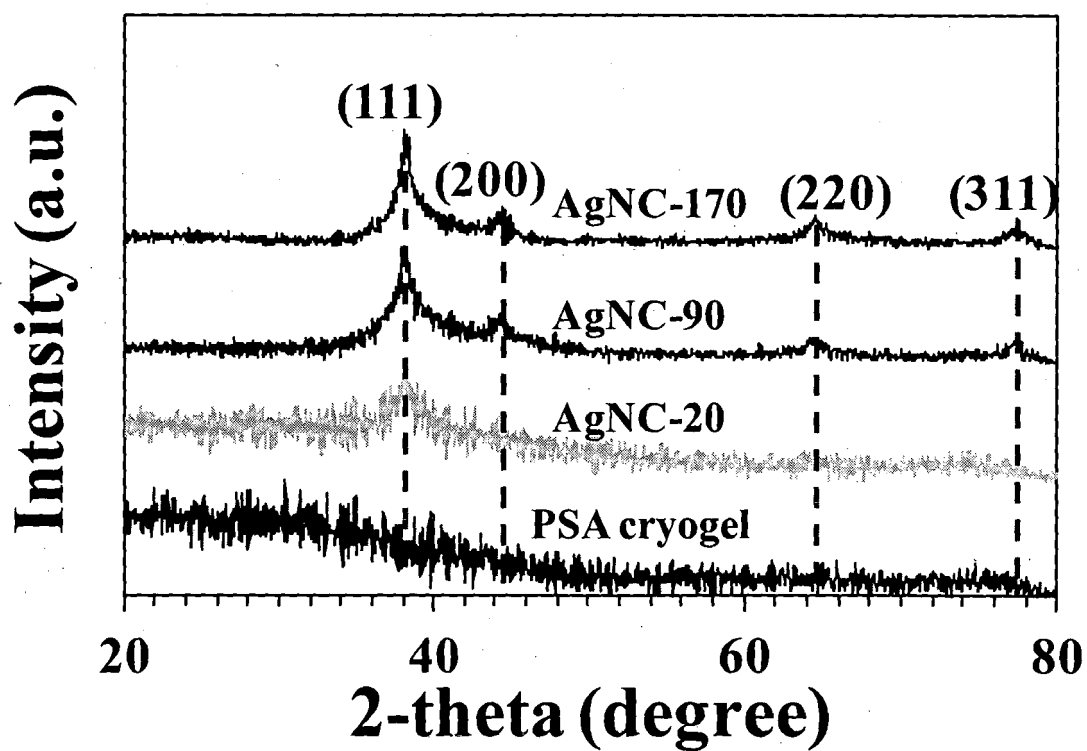
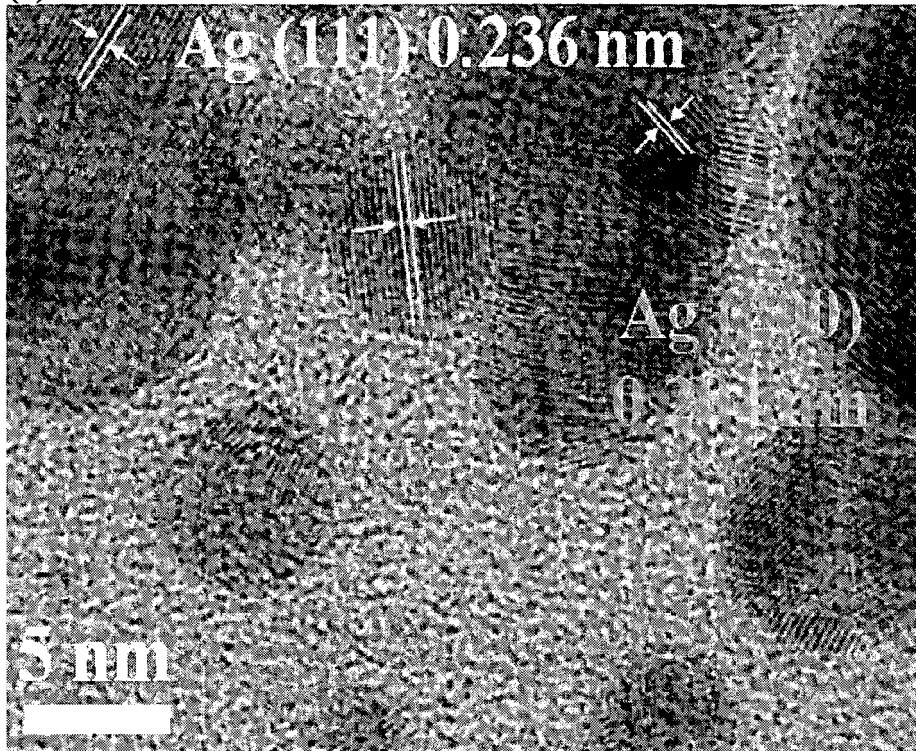


FIG. 5 (continued)

(c)



(d)

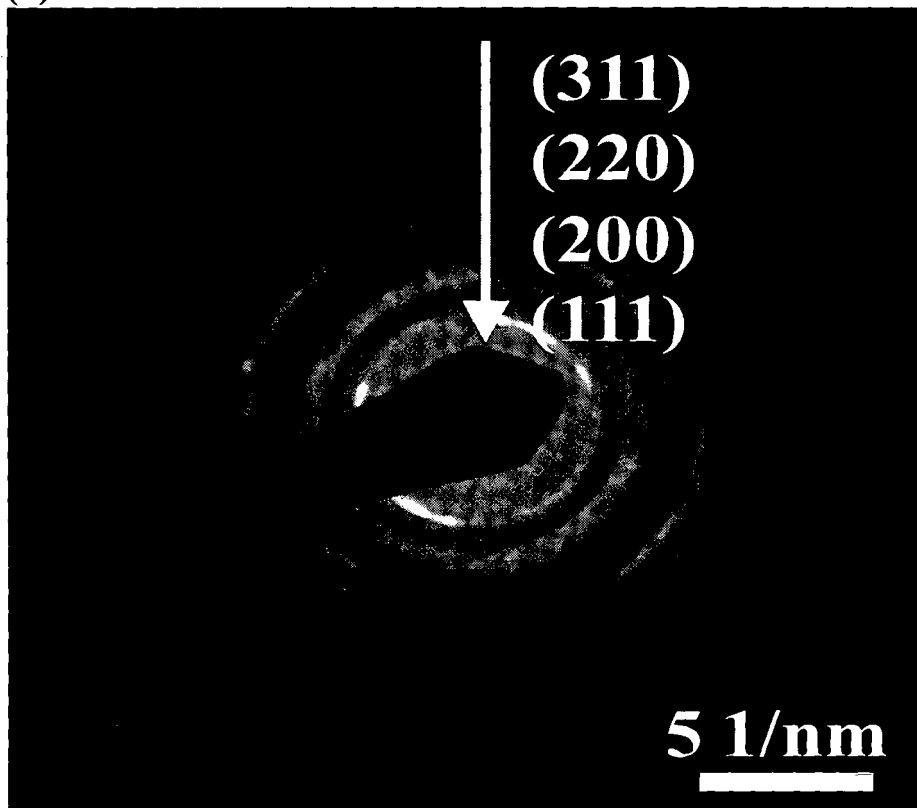


FIG. 6

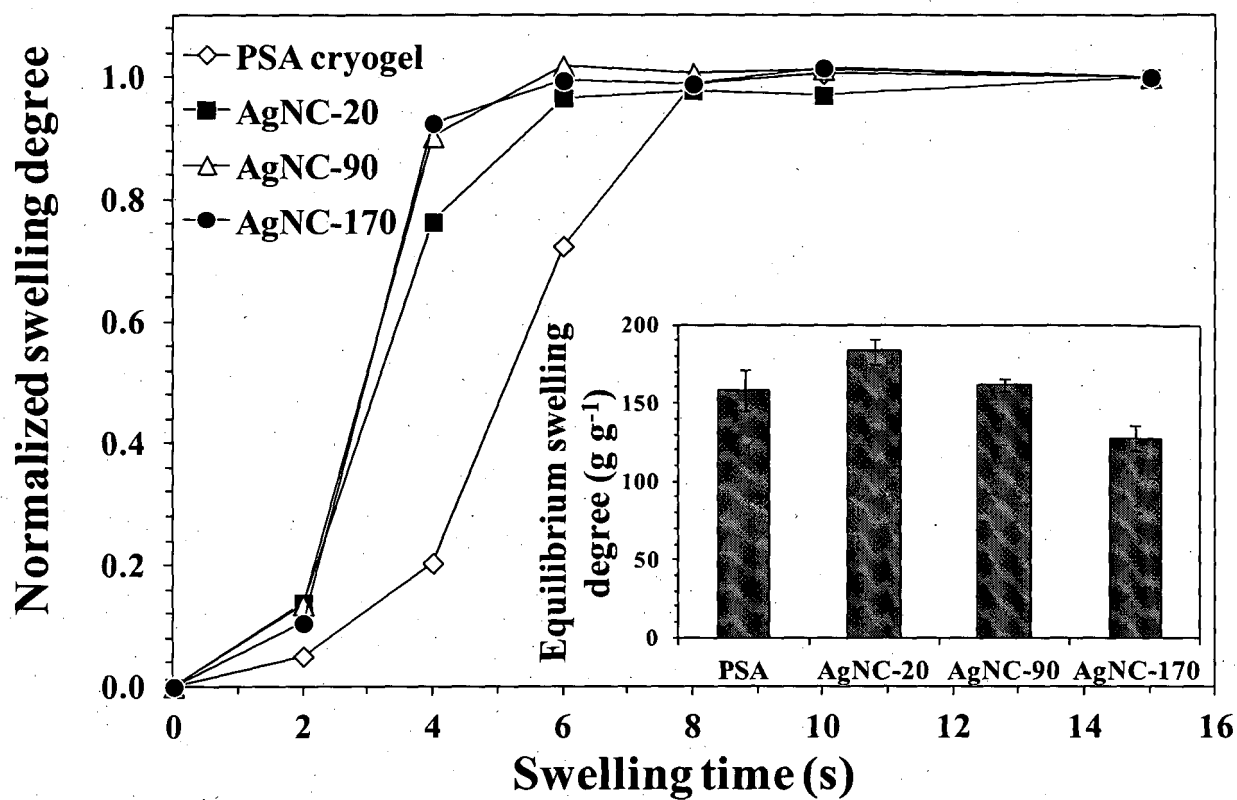


FIG. 7

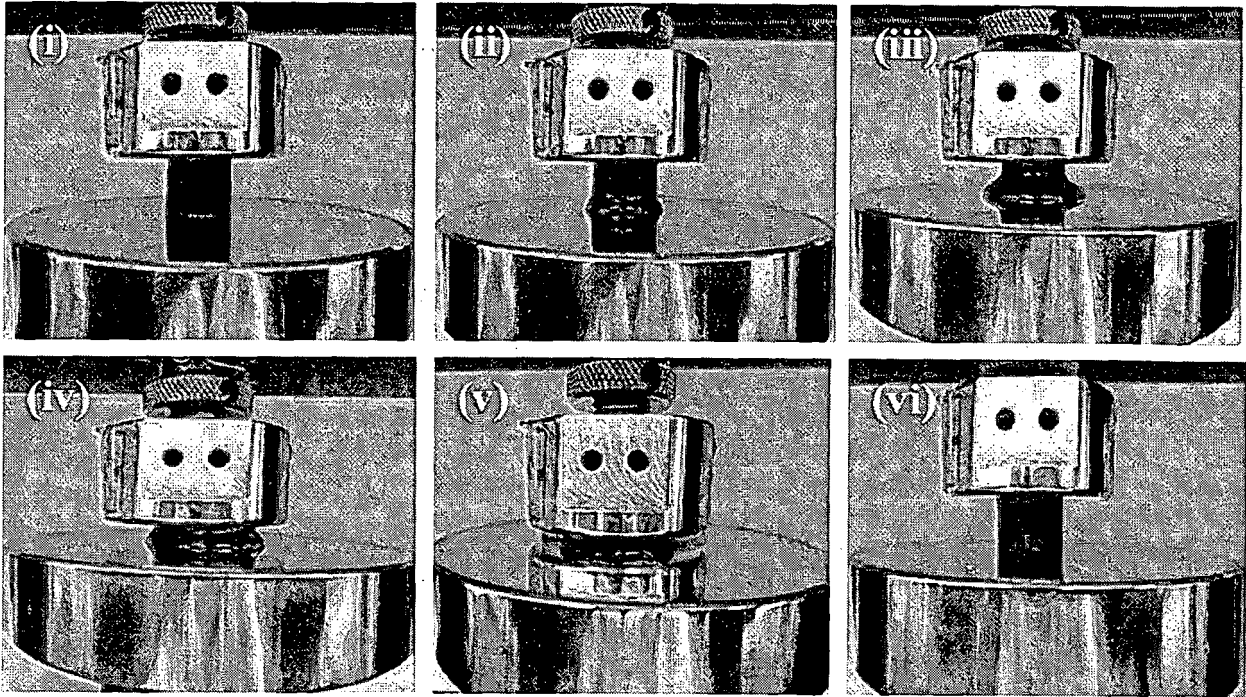


FIG. 8

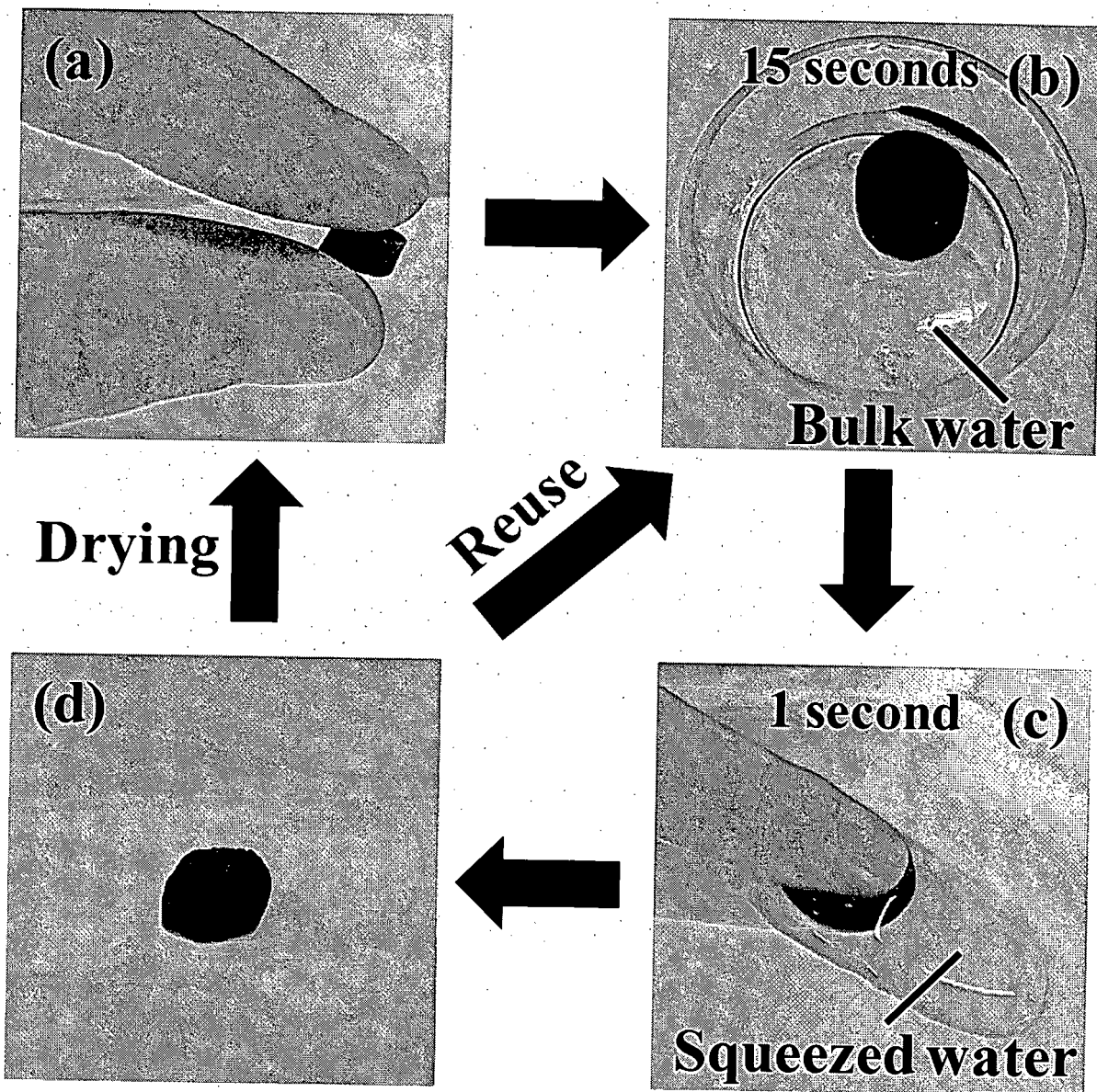
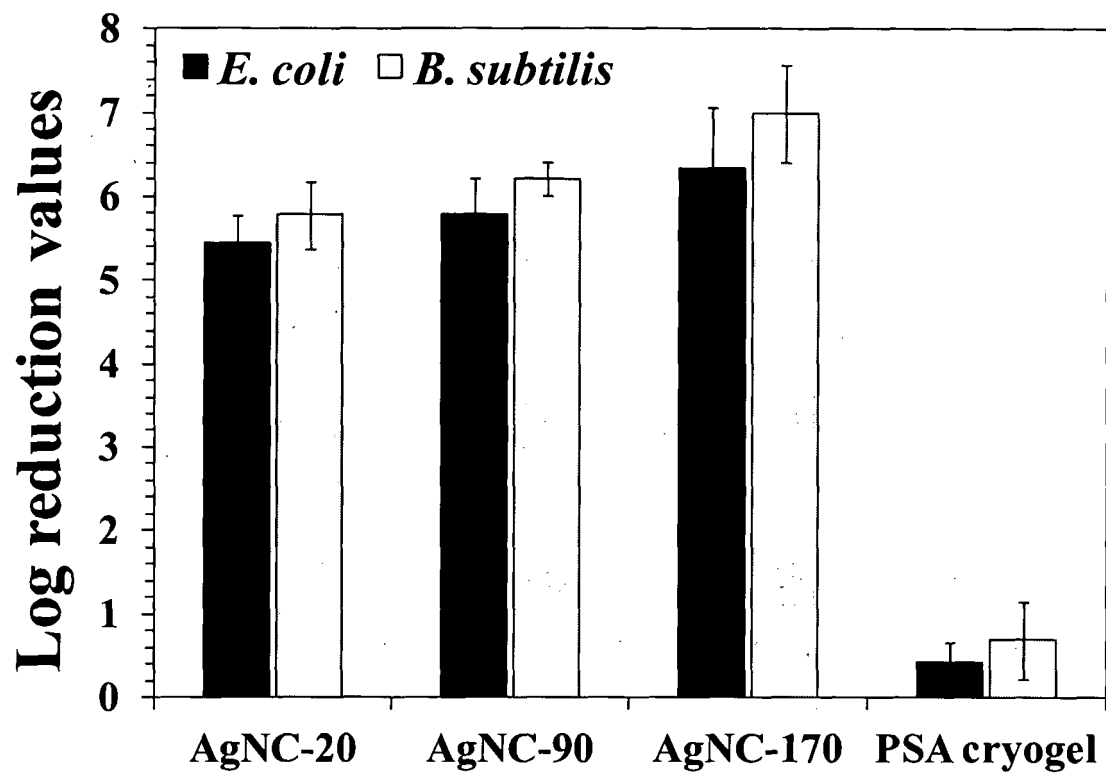


FIG. 9

(a)



(b)

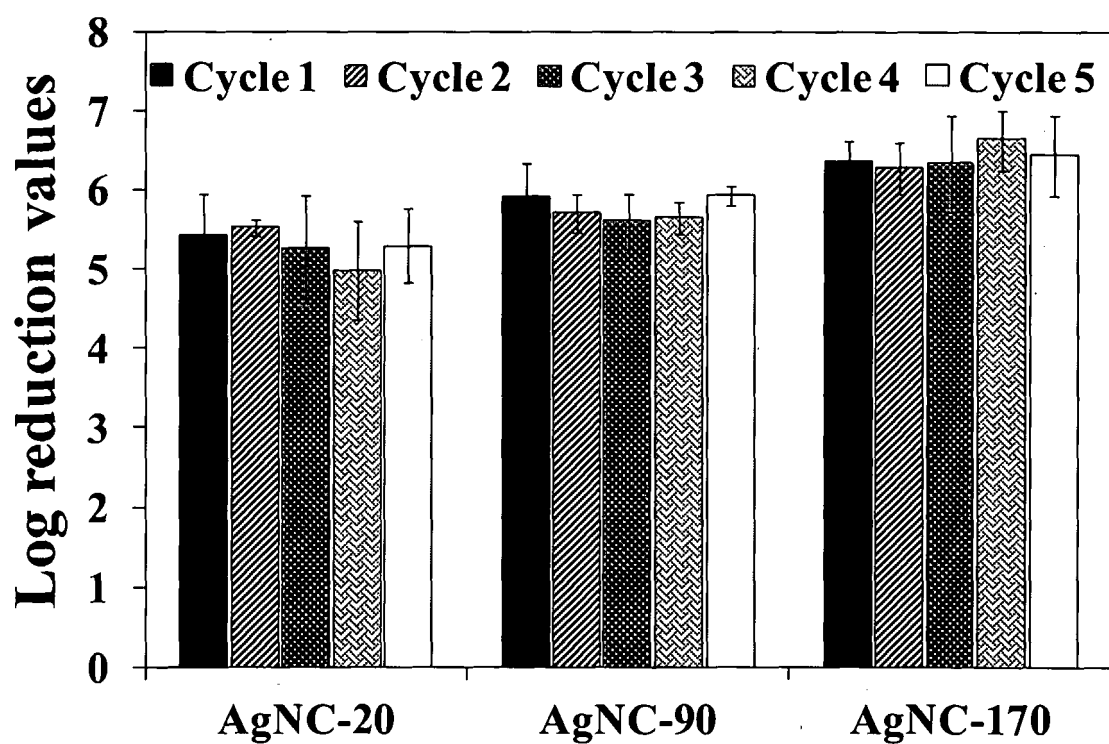
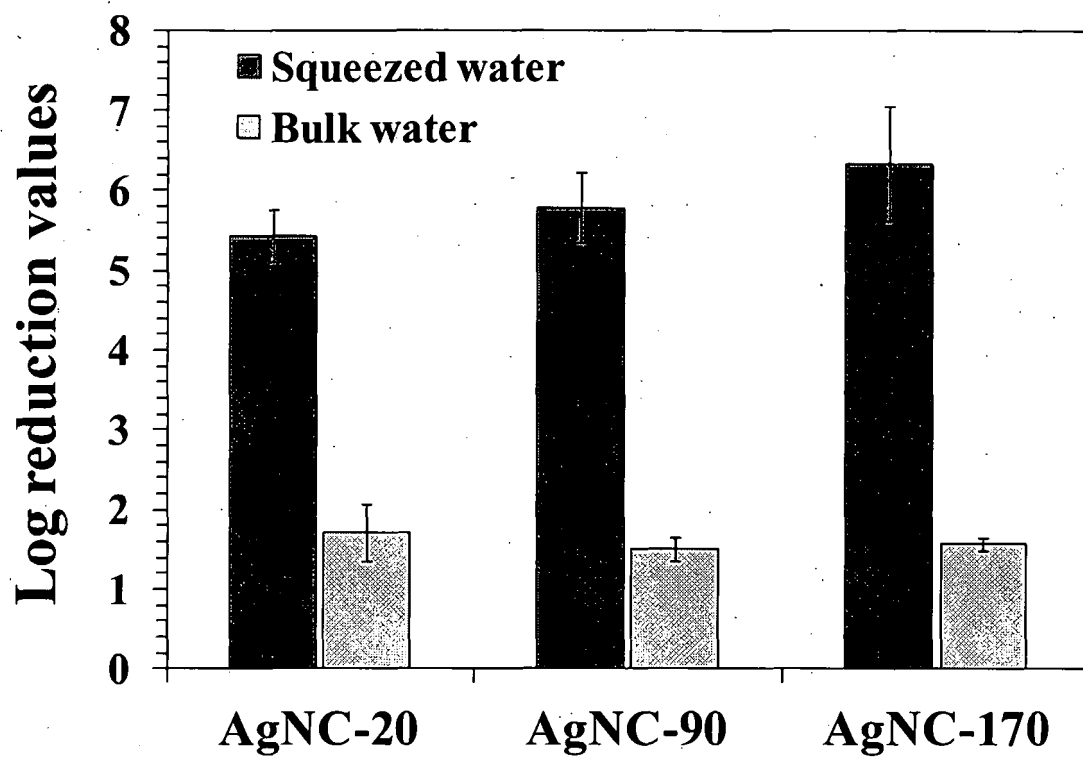


FIG. 9 (continued)

(c)



(d)

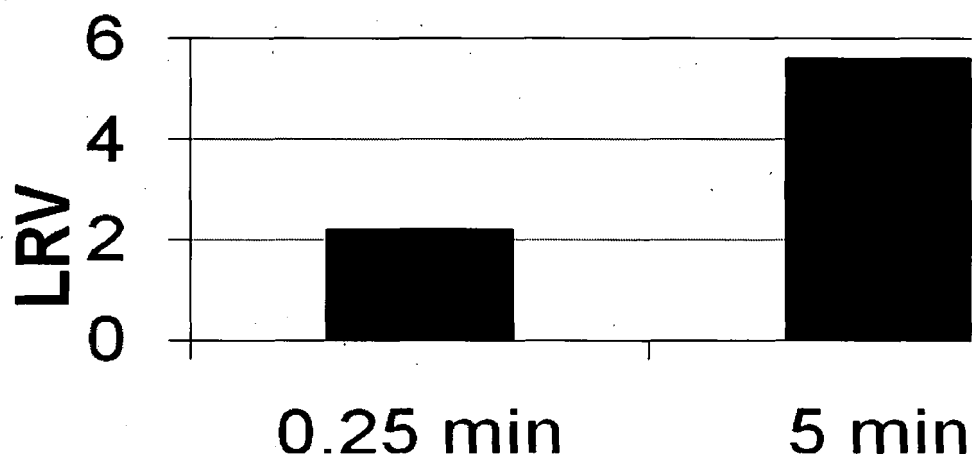


FIG. 10

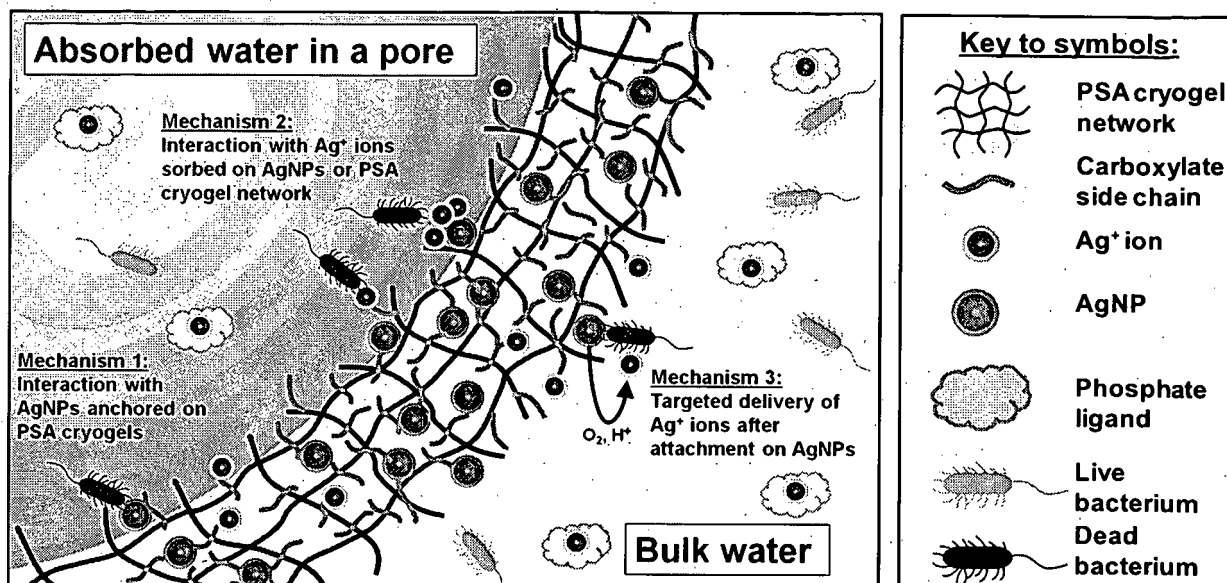


FIG. 11

Hydrogel

Cryogel

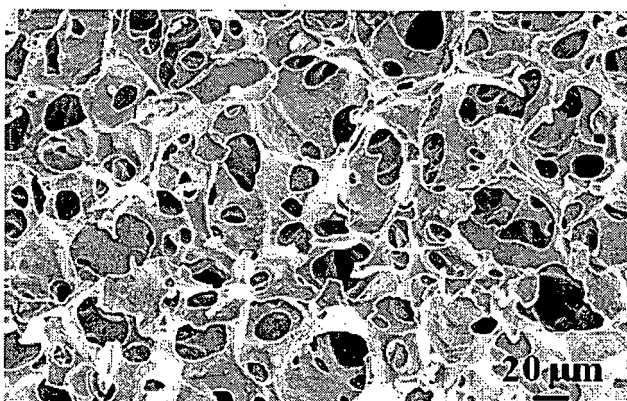
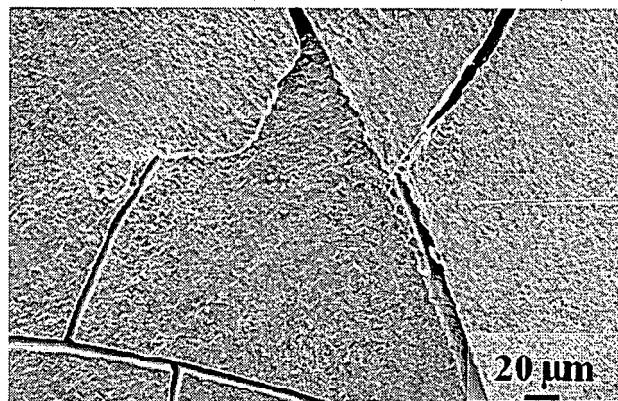


FIG. 12

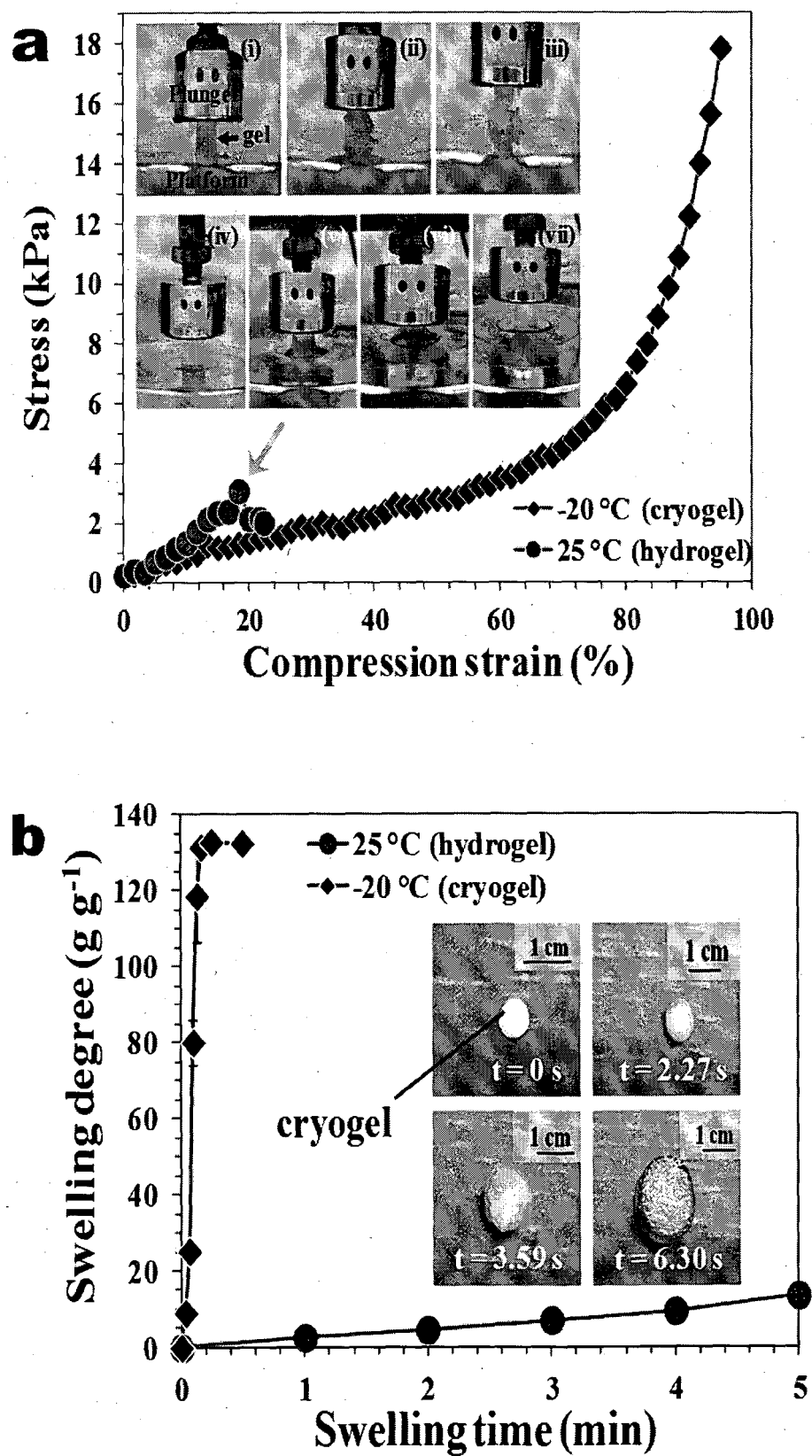


FIG. 13

