

Supplemental Materials

S.1. Effects of phosphate buffer concentration on the silica formation activity of PPI dendrimers a) silica production activity and b) size distributions for nanospheres produced from PPI dendrimers. Error bars represent the standard error associated with the sample size analyzed for the particle size distributions.

S.2. SEM images of silica nanospheres produced from the G0 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.3. SEM images of silica nanospheres produced from the G1 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.4. SEM images of silica nanospheres produced from the G2 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.5. SEM images of silica nanospheres produced from the G3 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.6. SEM images of silica nanospheres produced from the G4 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.7. SEM images of silica nanospheres produced from the G5 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.8. SEM images and size distribution histograms (error represents standard error of the data set) of silica nanospheres produced from the G6 PAMAM template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.9. SEM images of silica nanospheres produced from the G1 PPI template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.10. SEM images of silica nanospheres produced from the G2 PPI template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.11. SEM images of silica nanospheres produced from the G3 PPI template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.12. SEM images of silica nanospheres produced from the G4 PPI template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.13. SEM images of silica nanospheres produced from the G5 PPI template in concentrations of phosphate buffer of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

S.14. SEM images of silica nanospheres produced from the G4 PAMAM template in a LiCl solution with concentrations of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM, h) 100 mM, i) 200 mM, j) 300 mM and k) 400 mM.

S.15. SEM images and size distribution histograms (error represents the standard error of the data set) of silica nanospheres produced from the G4 PAMAM template in a NaCl solution with concentrations of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM, h) 100 mM, i) 200 mM, j) 300 mM and k) 400 mM.

S.16. SEM images of silica nanospheres produced from the G4 PAMAM template in a KCl solution with concentrations of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM, h) 100 mM, i) 200 mM, j) 300 mM and k) 400 mM.

S.17. SEM images of silica nanospheres produced from the G4 PAMAM template in a RbCl solution with concentrations of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM, h) 100 mM, i) 200 mM, j) 300 mM and k) 400 mM.

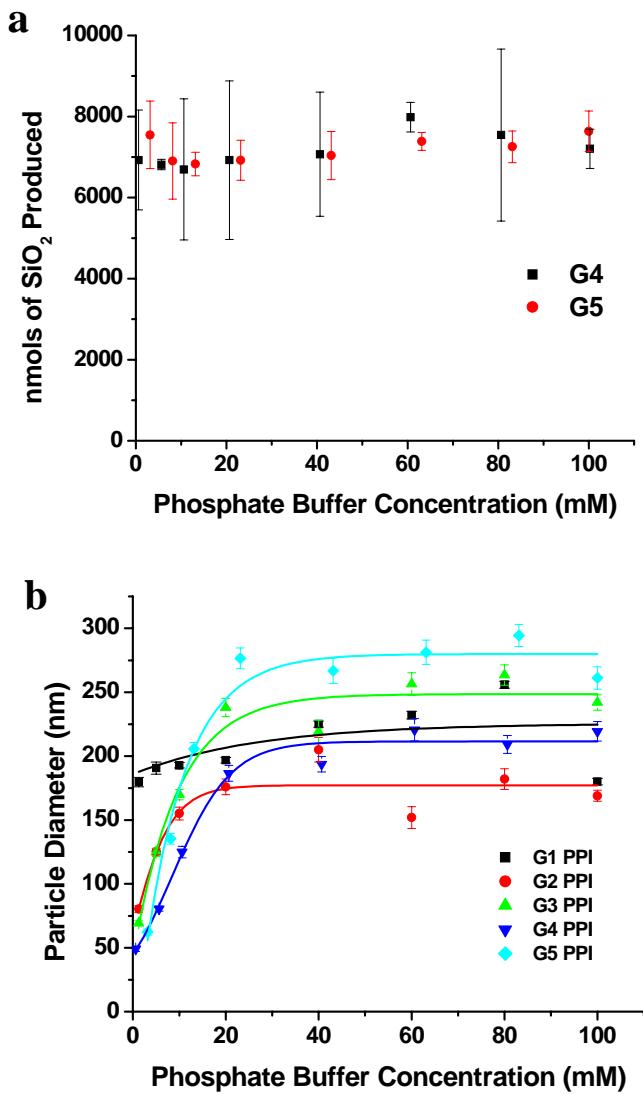
S.18. SEM images of silica nanospheres produced from the G4 PAMAM template in a CsCl solution with concentrations of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM, h) 100 mM, i) 200 mM, j) 300 mM and k) 400 mM.

S.19. SEM images of silica nanospheres produced from the G4 PAMAM template in a MgCl₂ solution with concentrations of a) 0.5 mM, b) 5 mM, c) 10 mM, d) 20 mM, e) 40 mM, f) 60 mM, g) 80 mM and h) 100 mM.

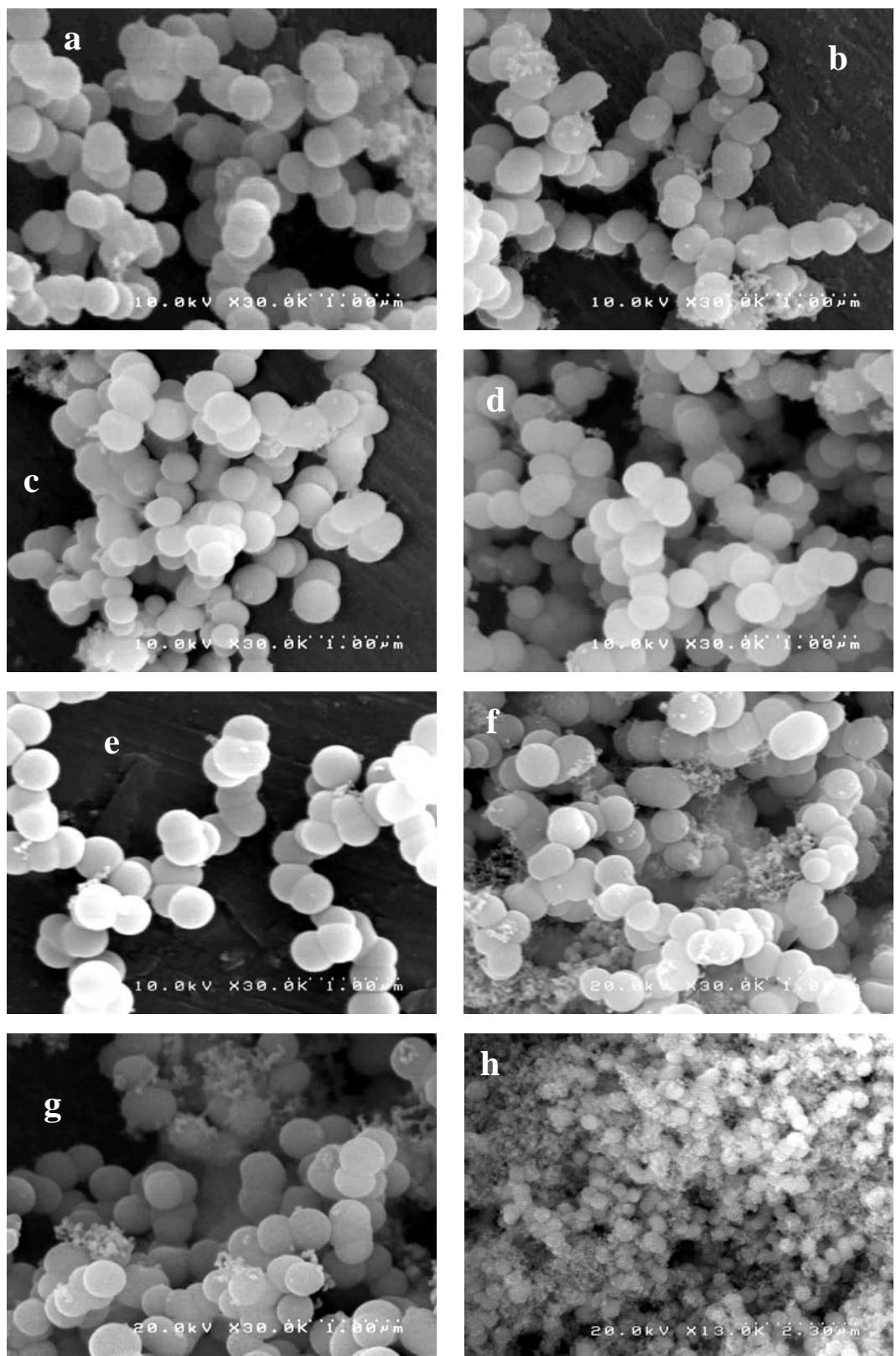
S.20. Silica production based upon the primary amine concentration of the G4 PAMAM template in a 100 mM NaCl solution at pH 7.5.

S.21. MgCl₂ concentration effects on a) silica production activity of 20 mM primary amine concentration of G4 PAMAM dendrimers and b) particle size distribution.

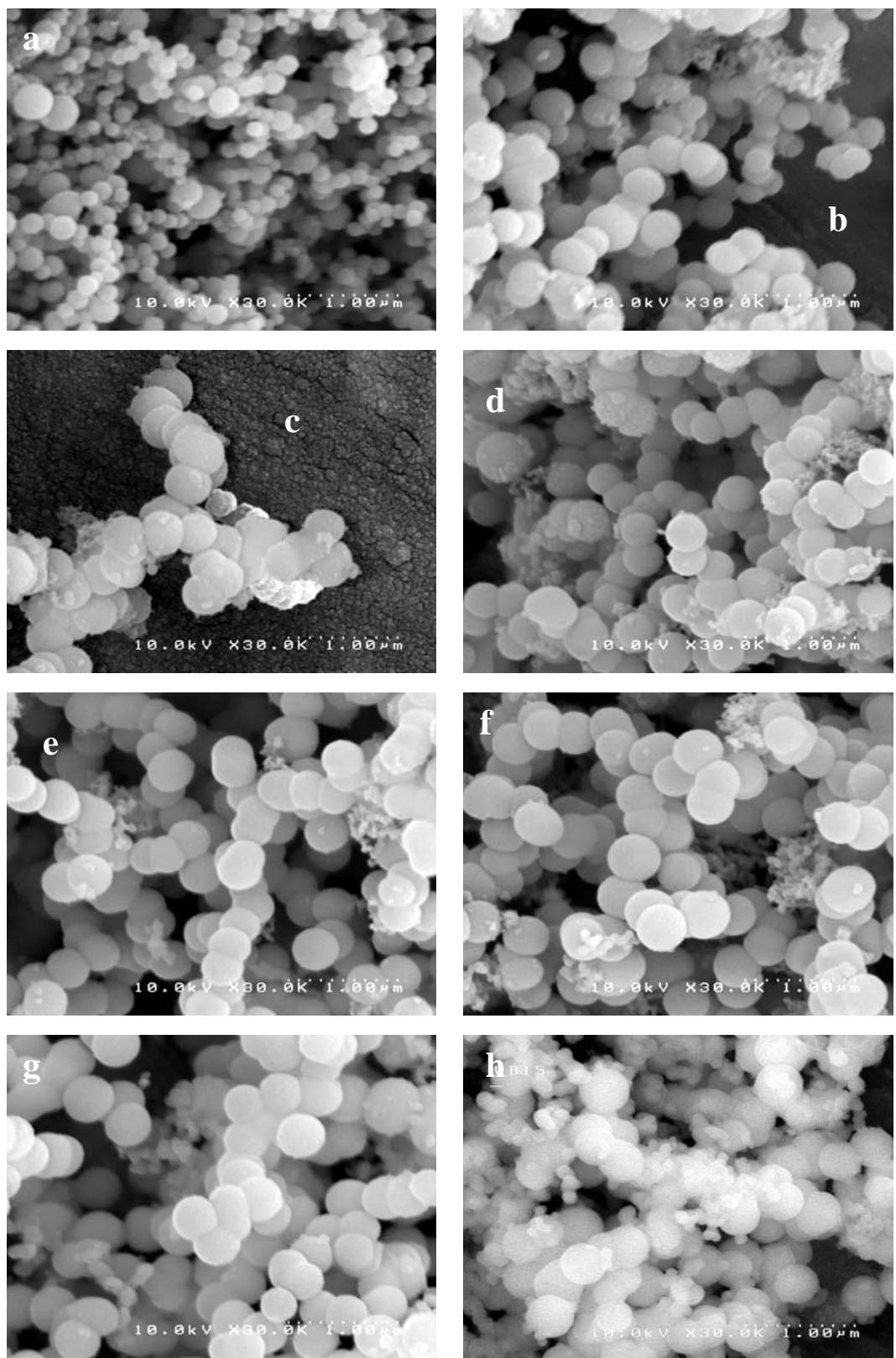
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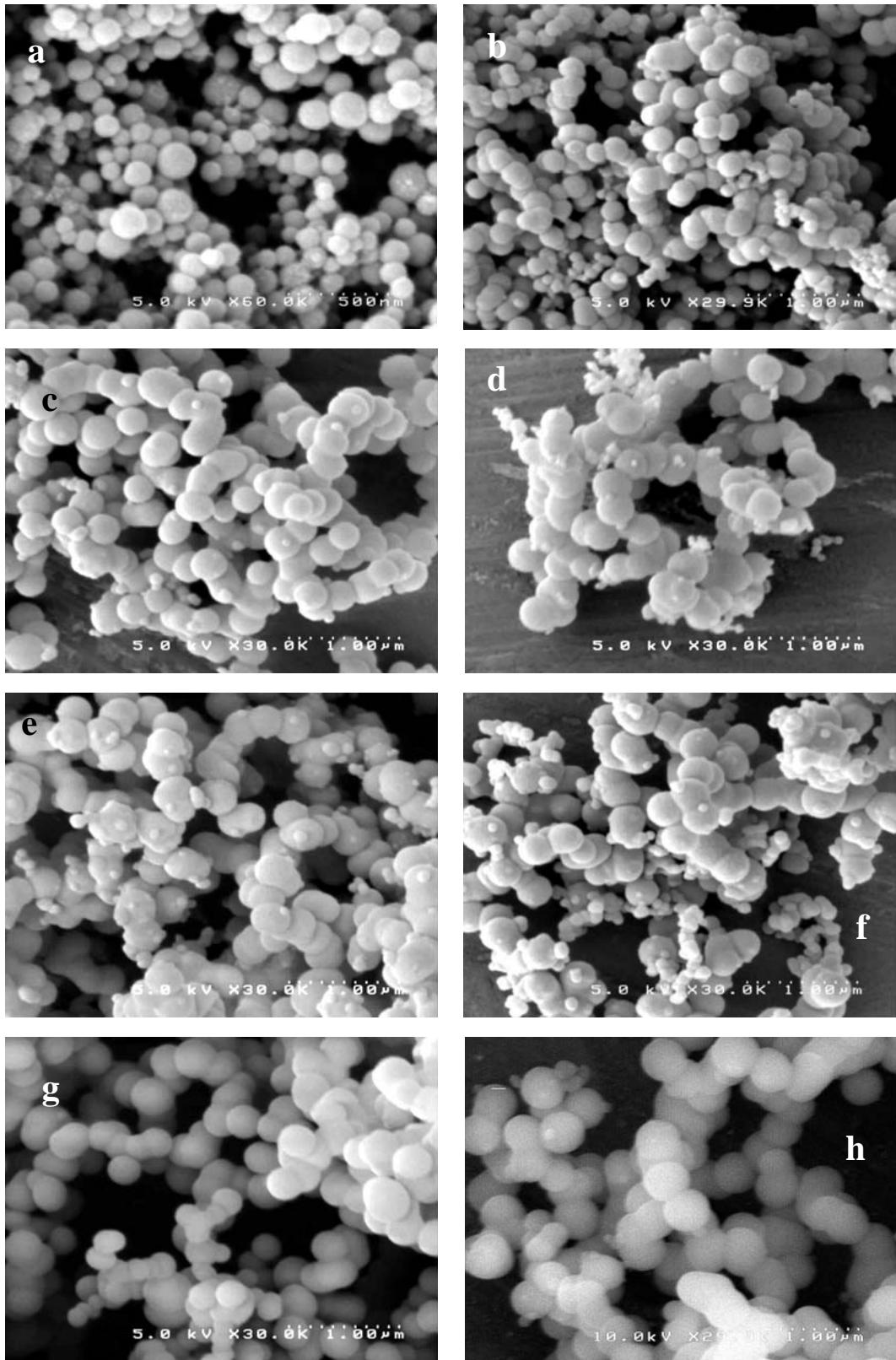
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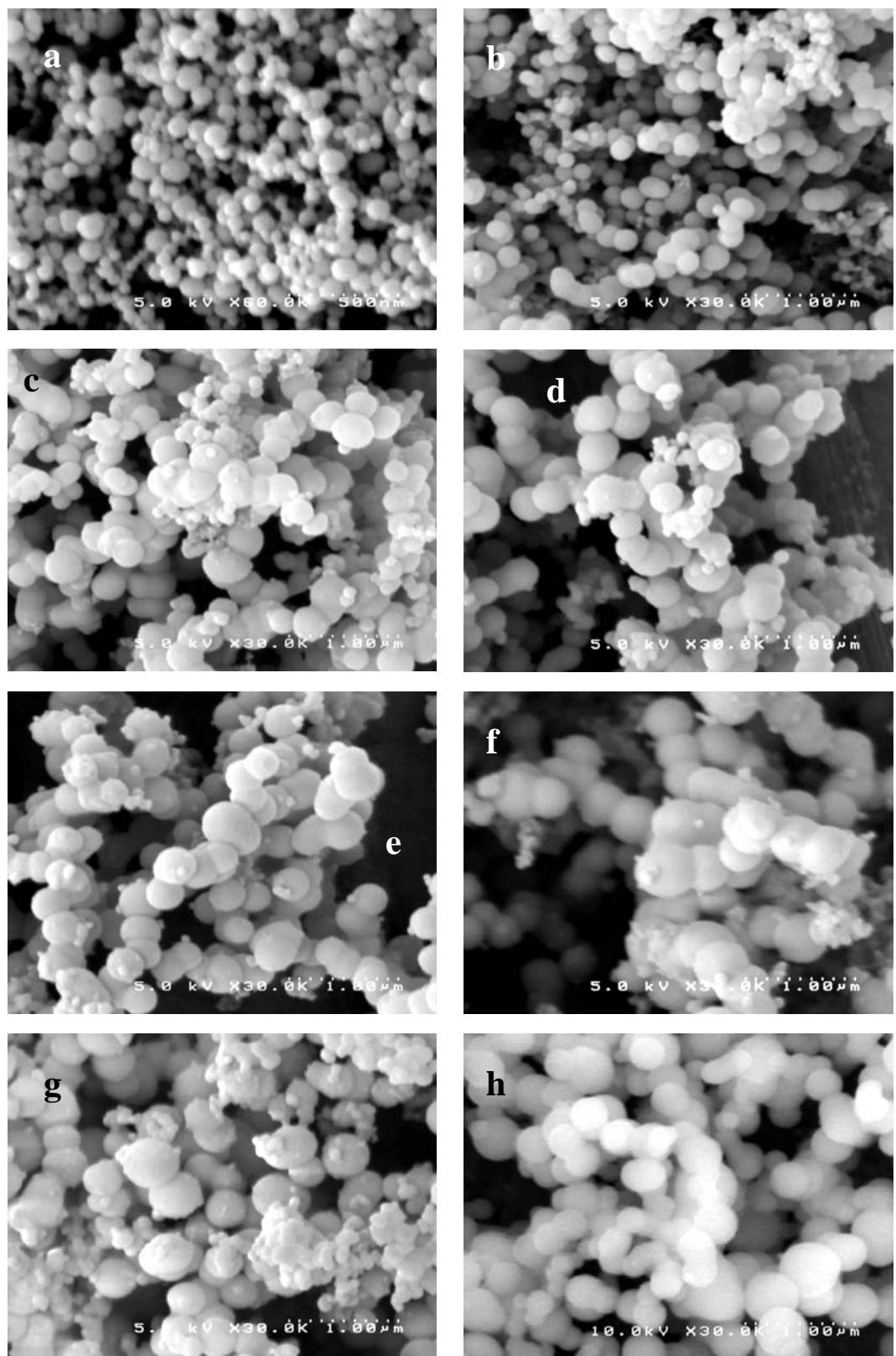
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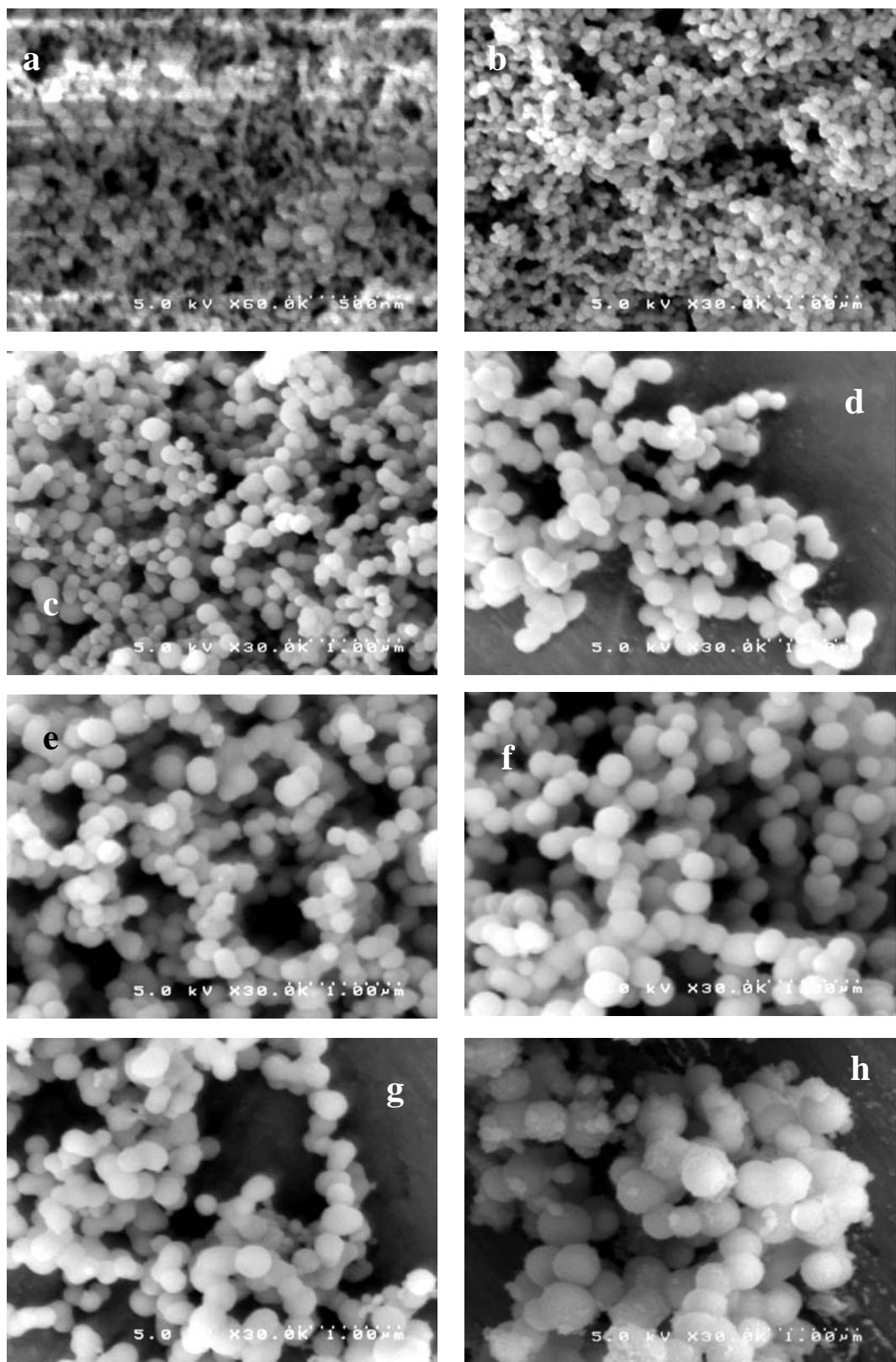
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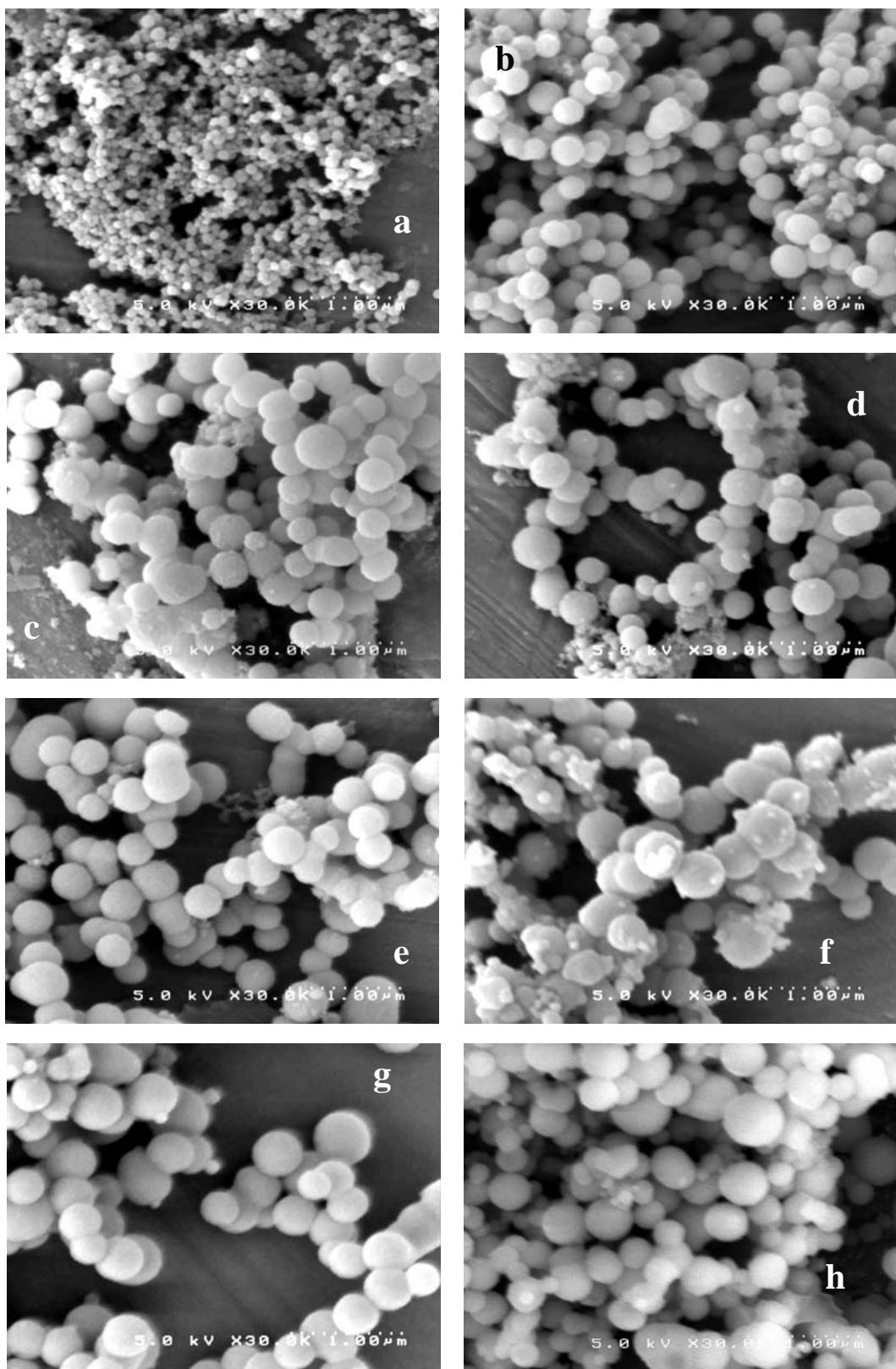
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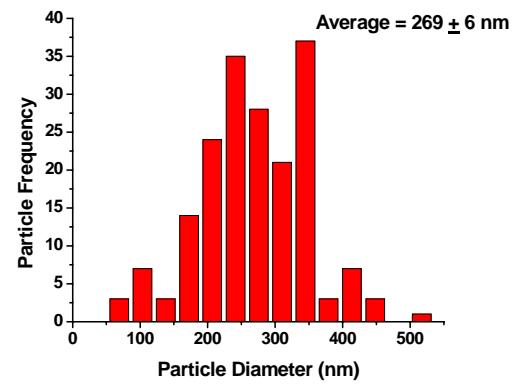
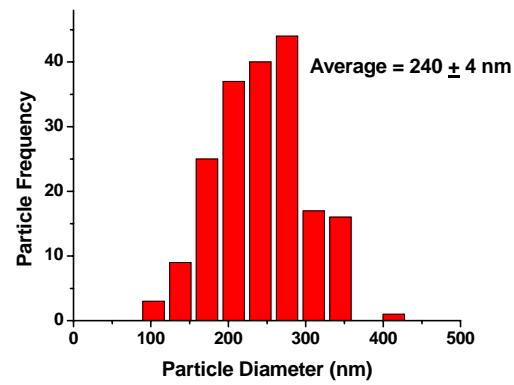
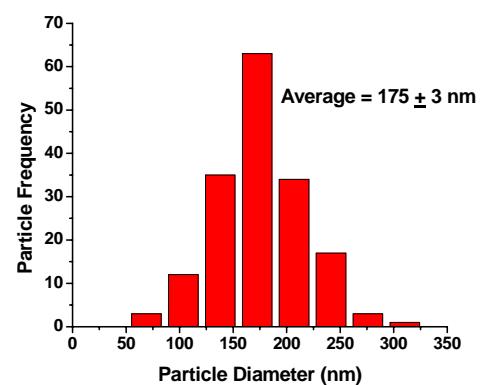
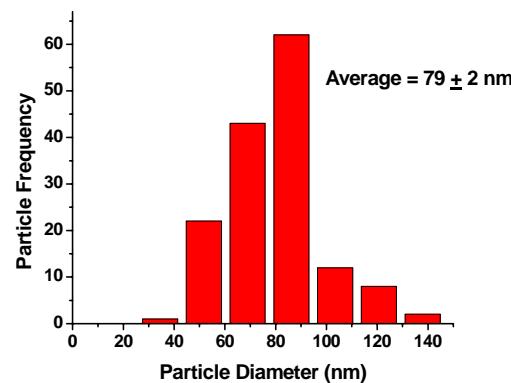
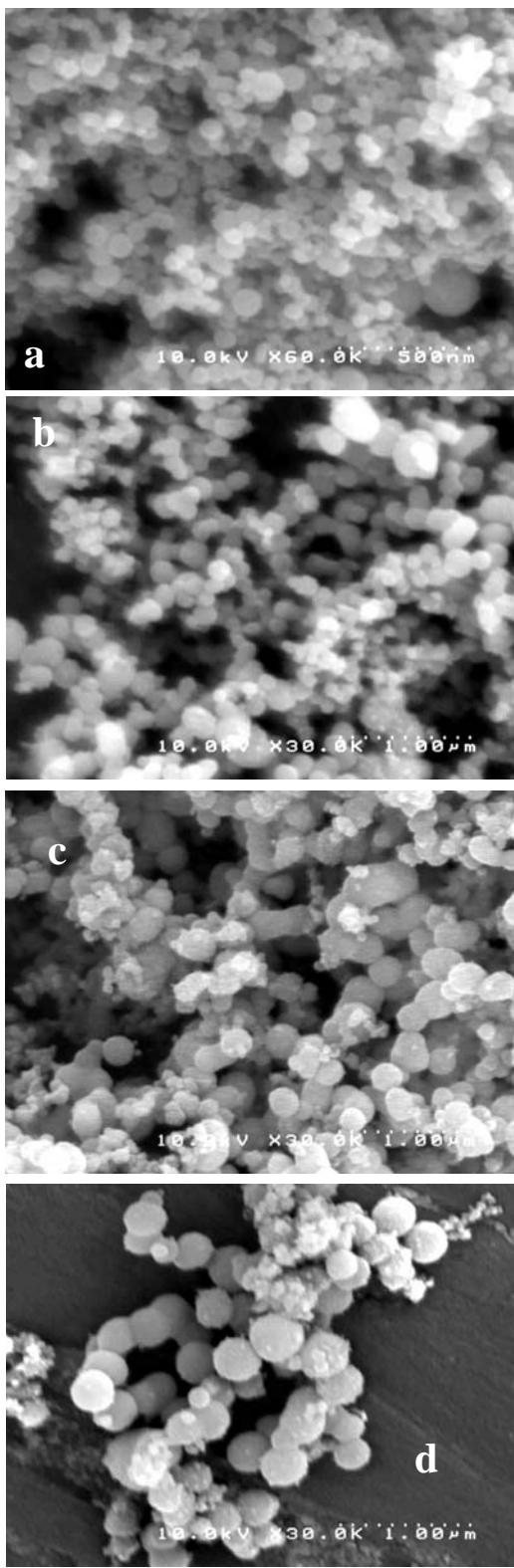
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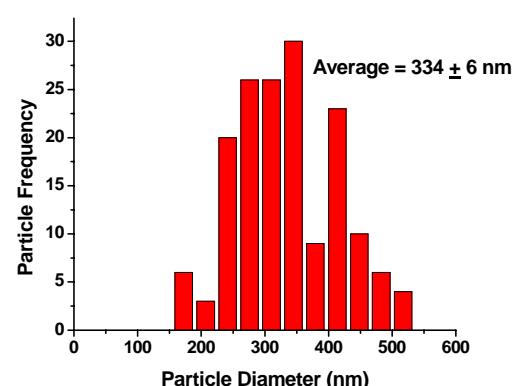
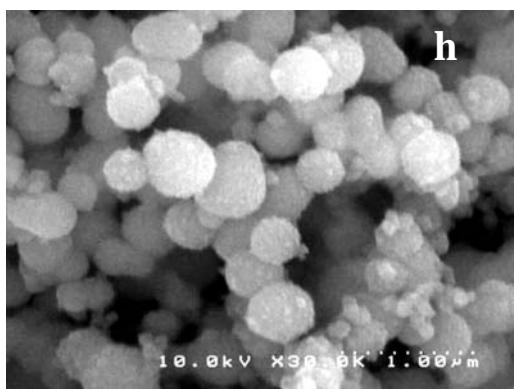
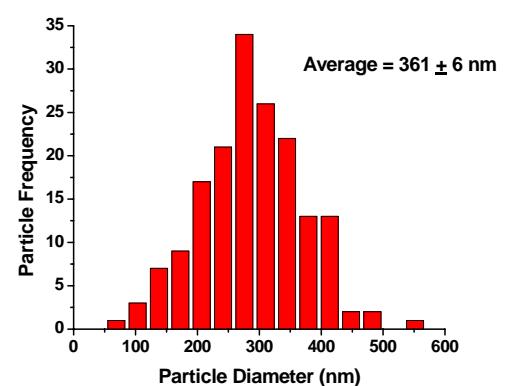
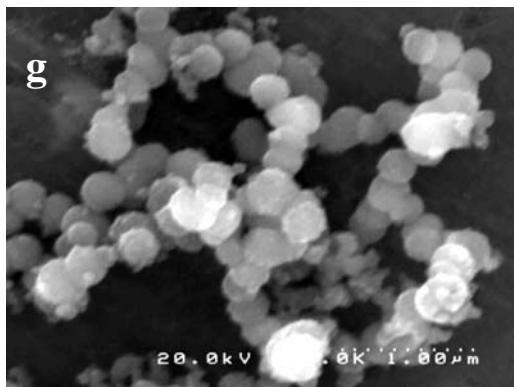
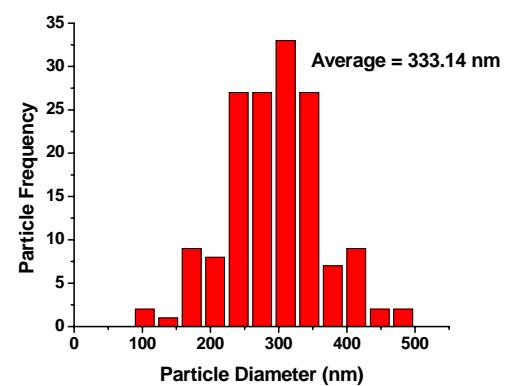
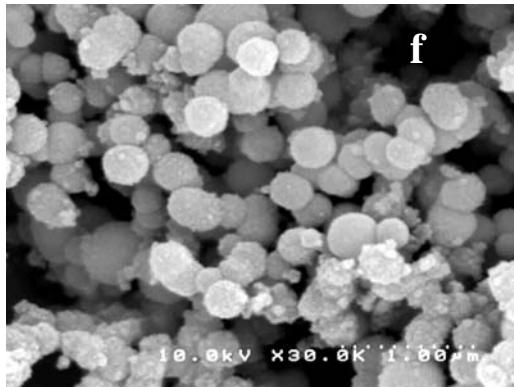
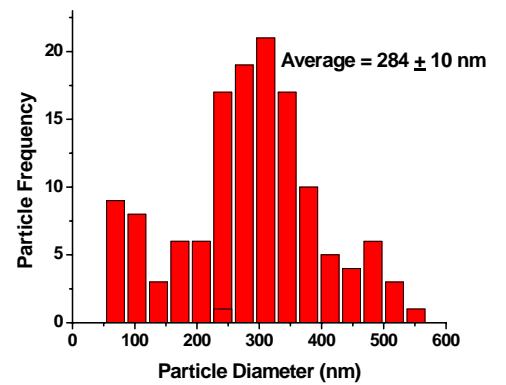
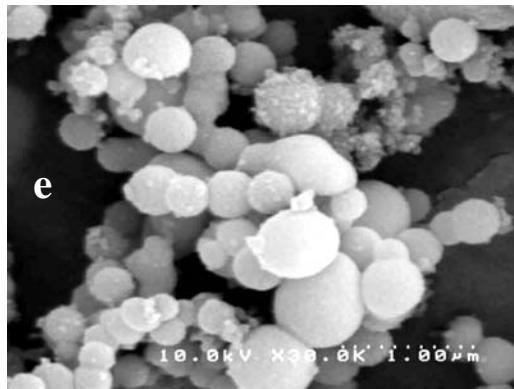


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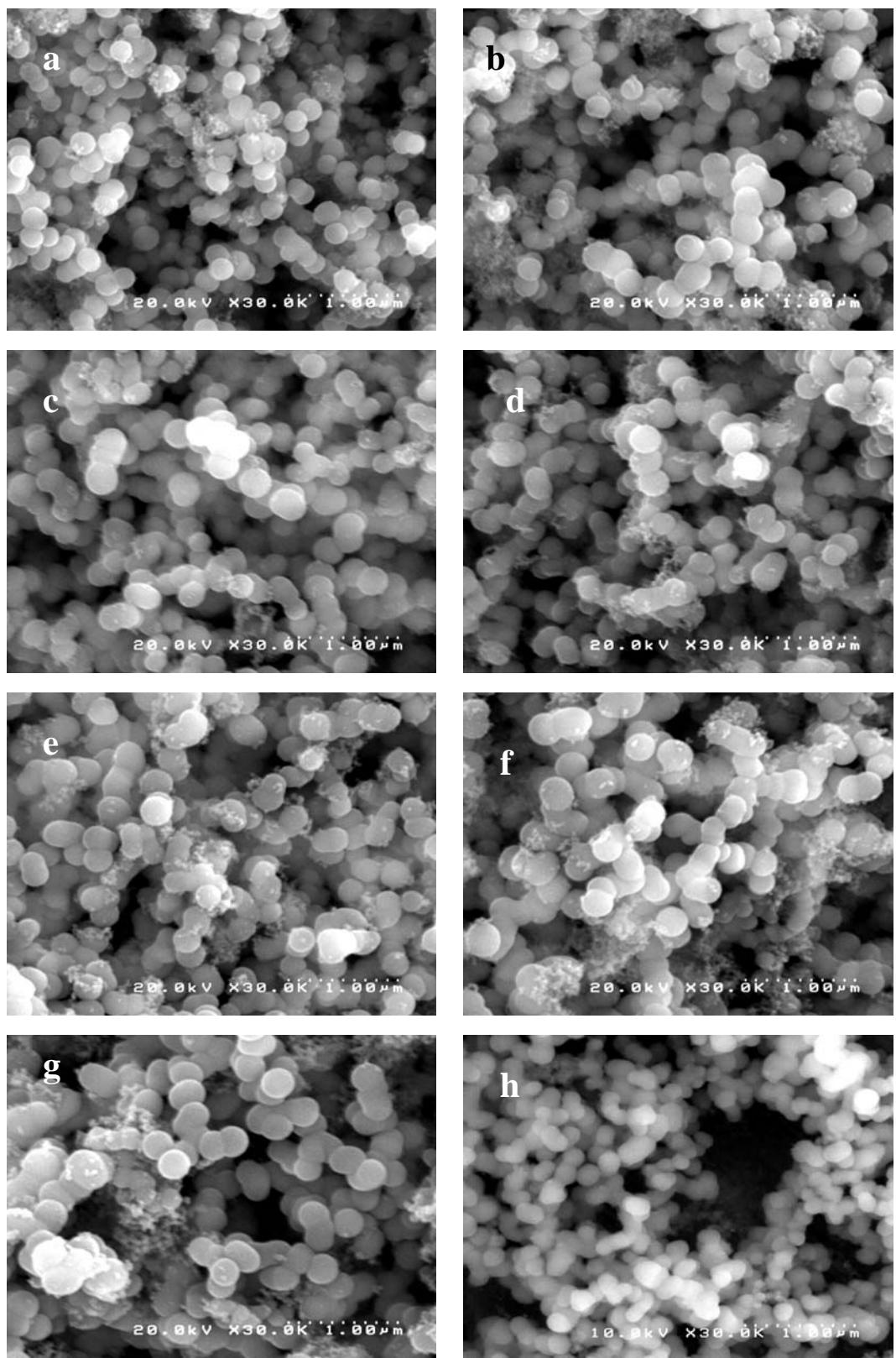


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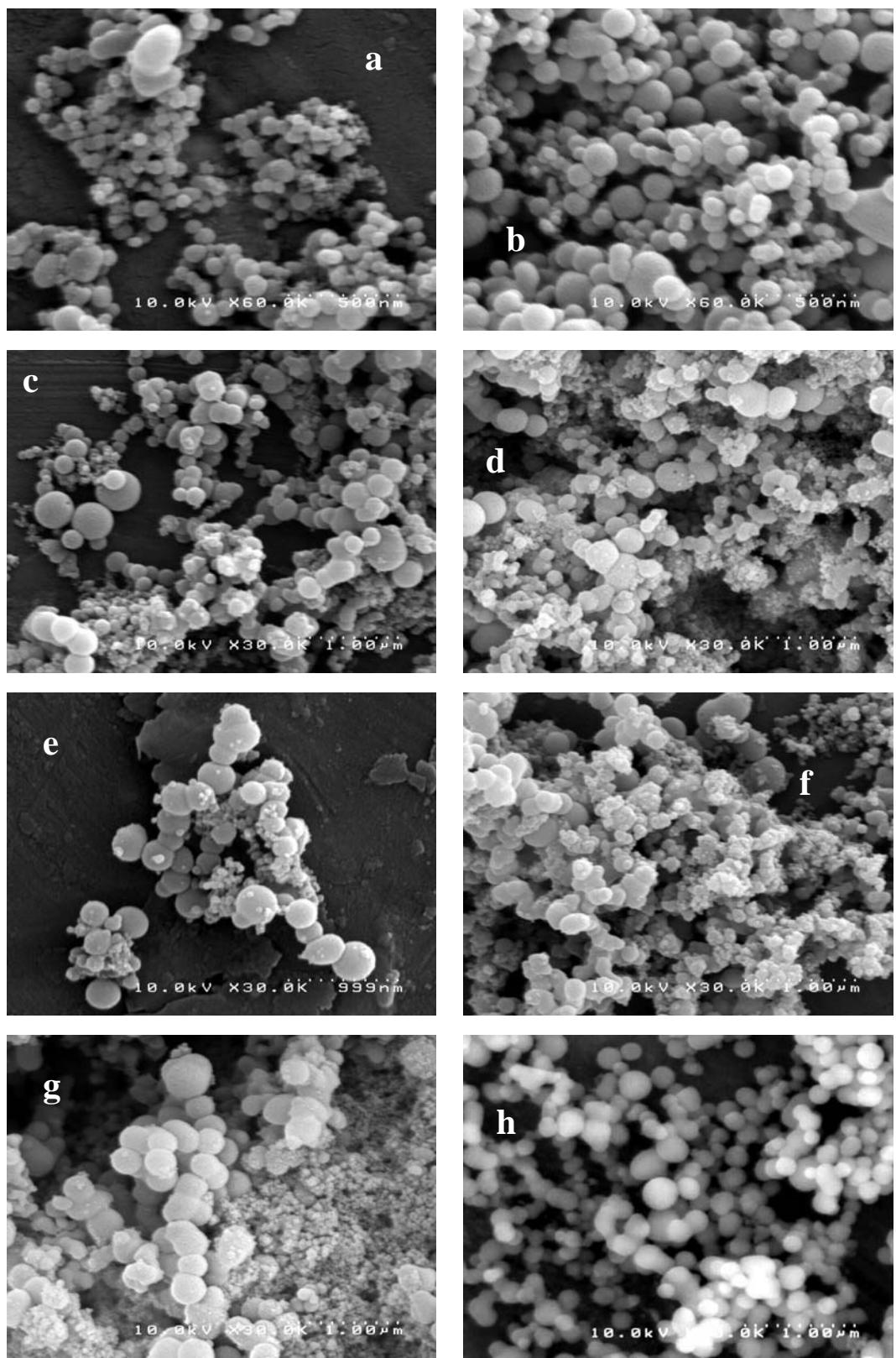




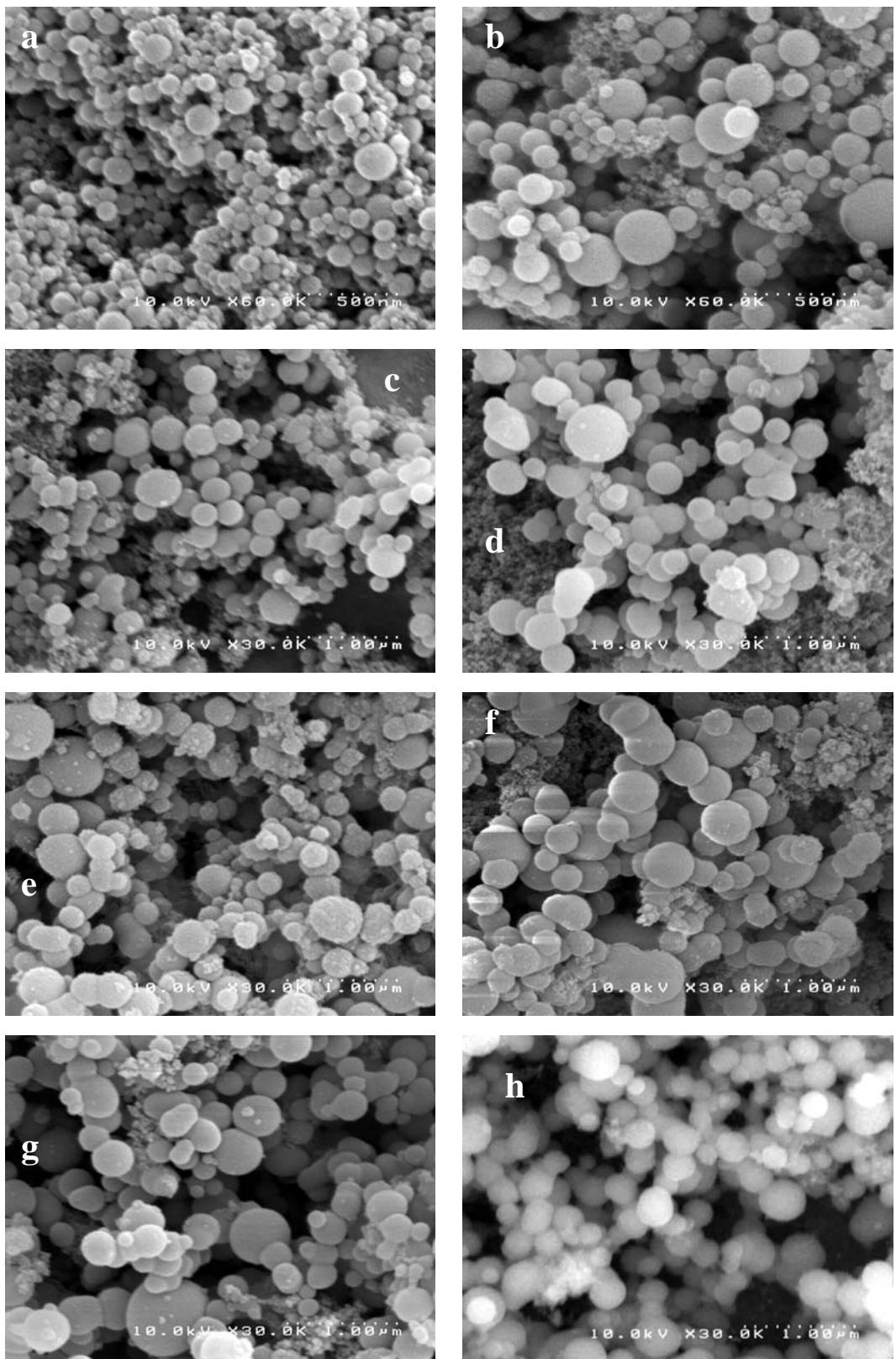
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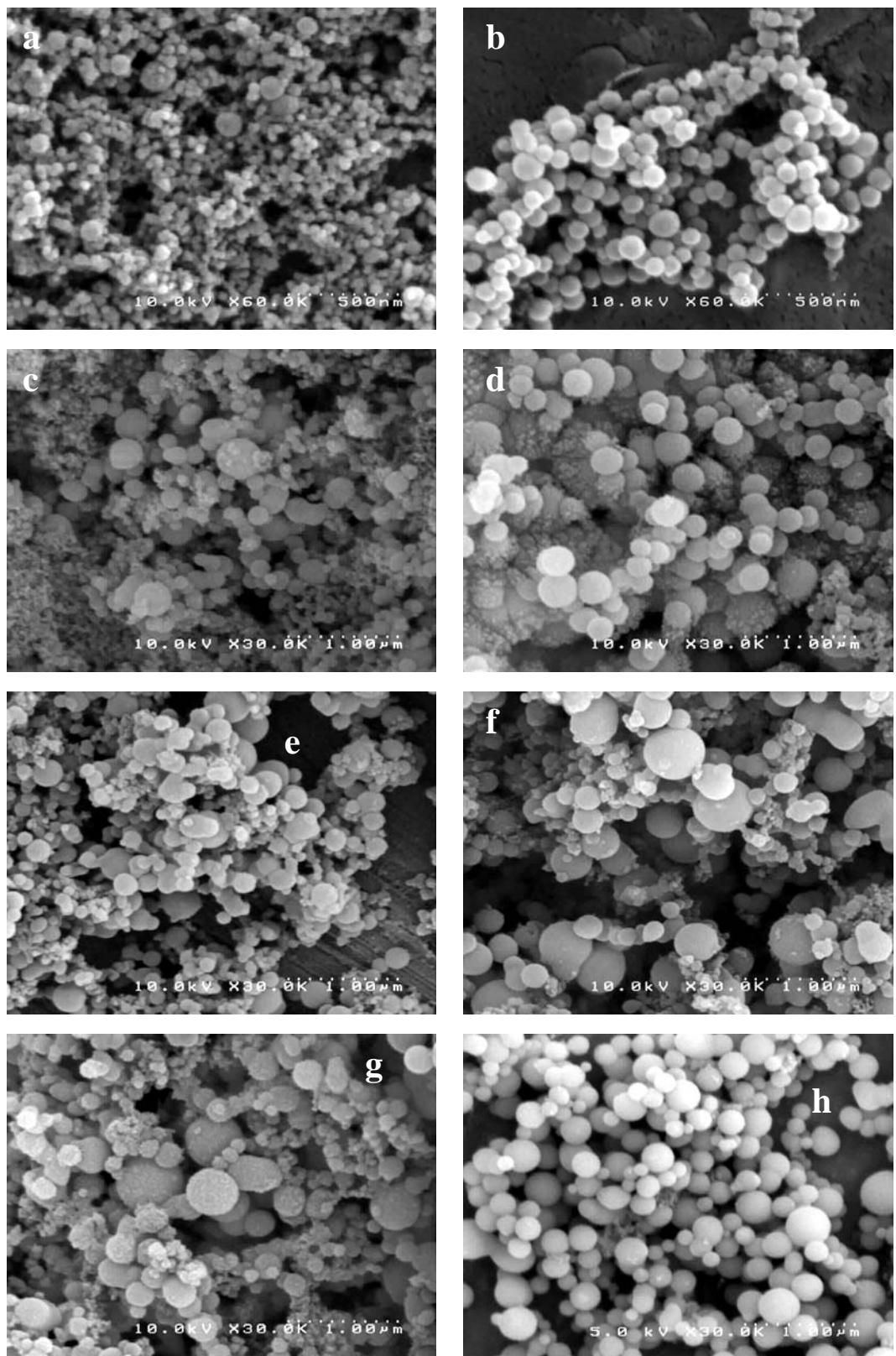
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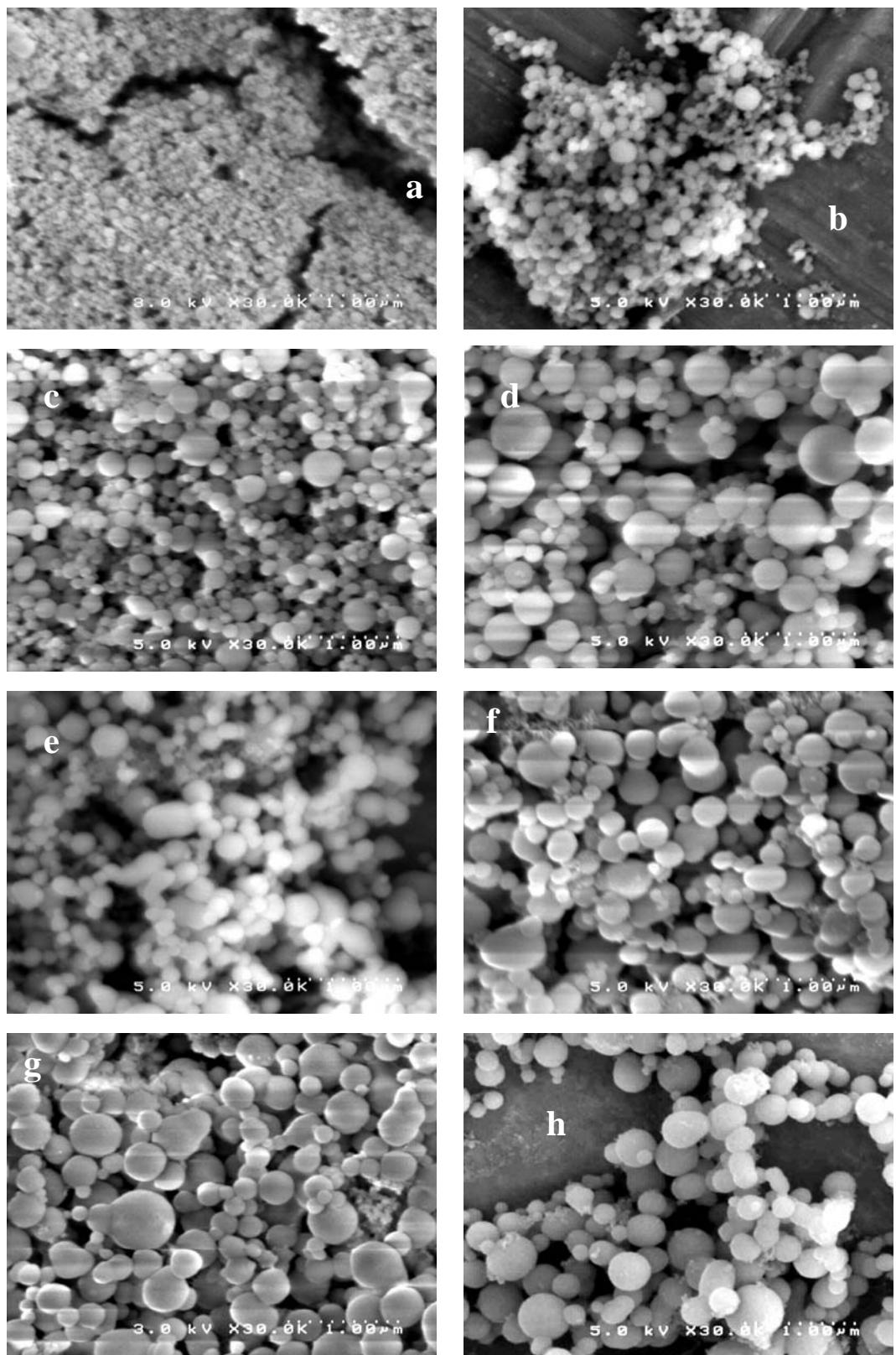
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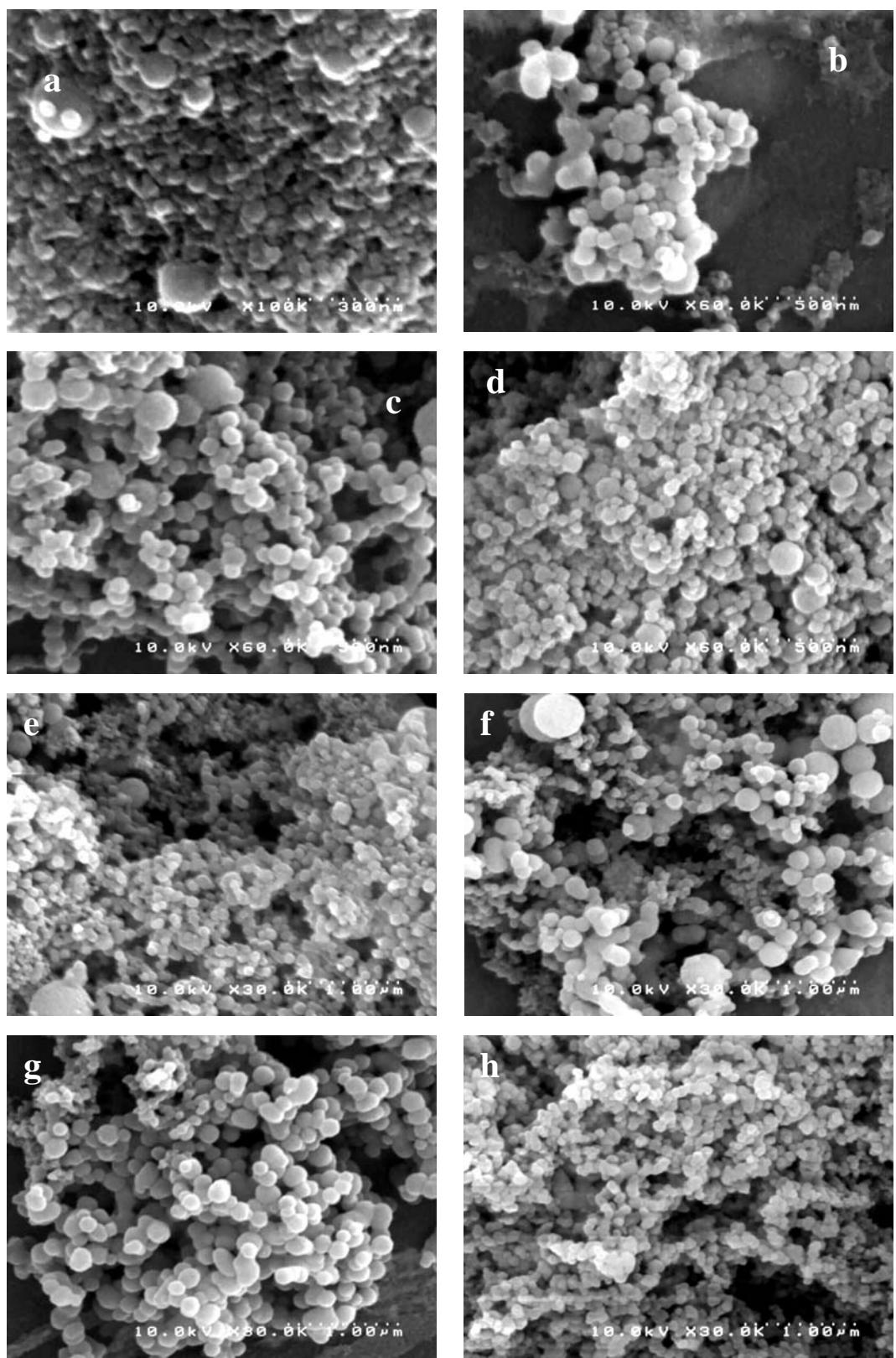
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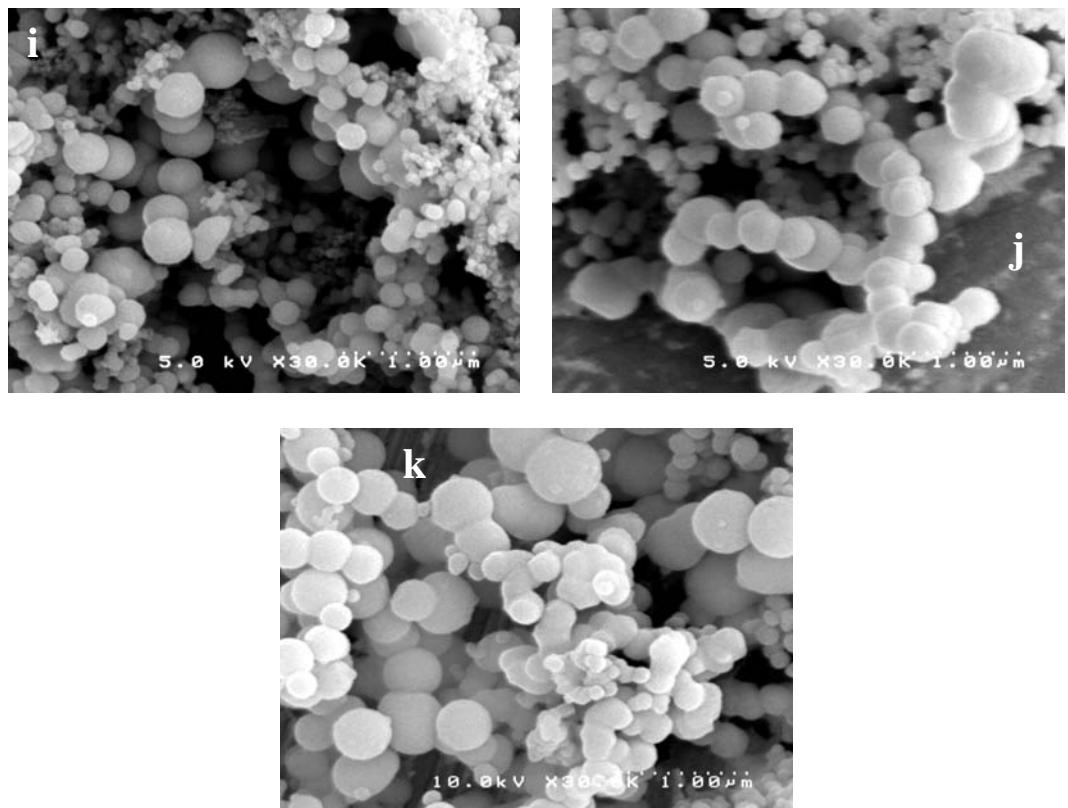


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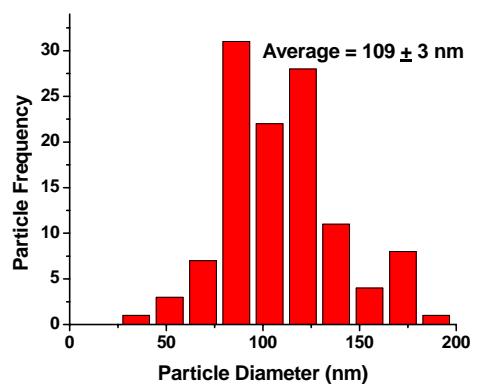
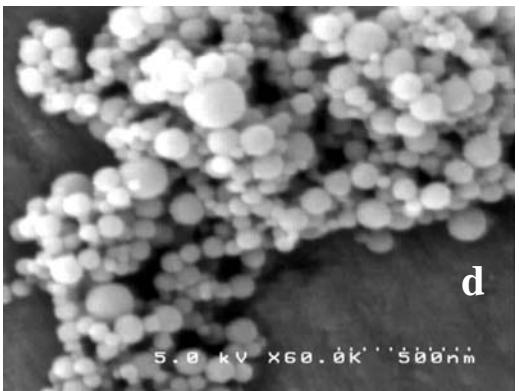
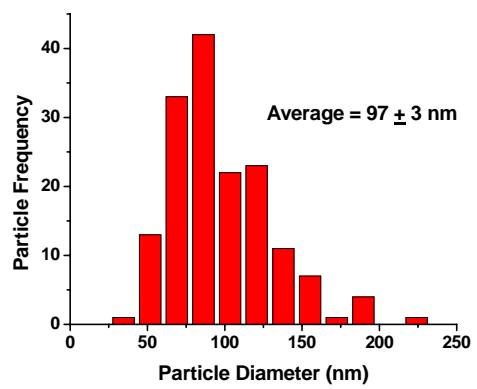
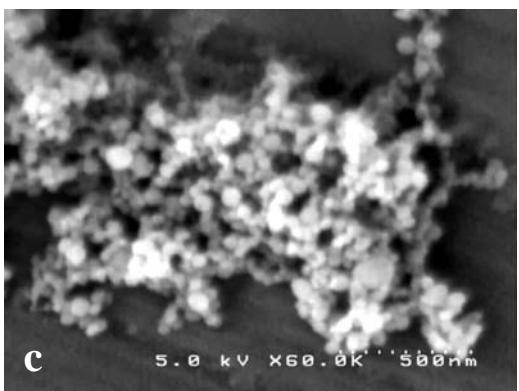
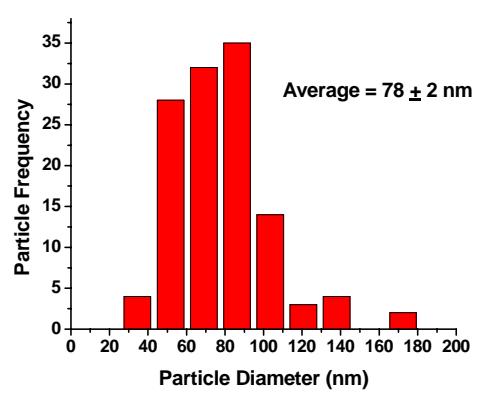
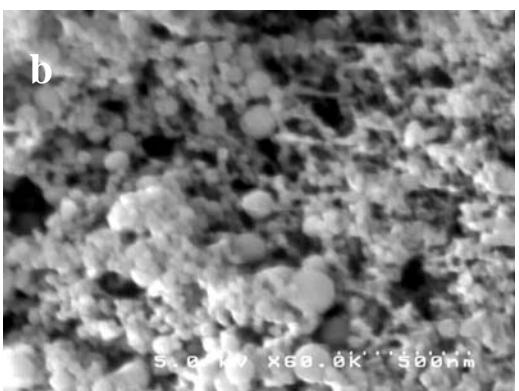
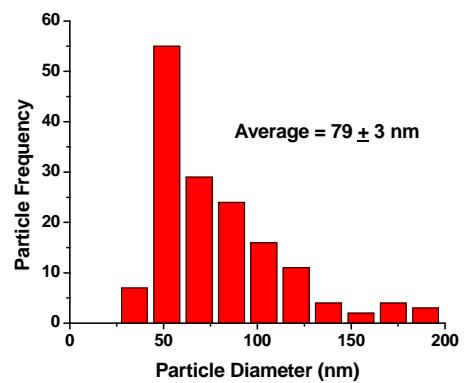
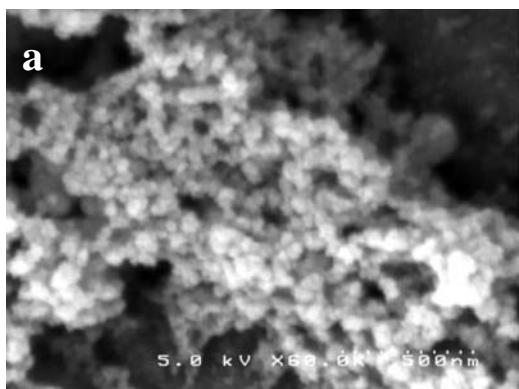


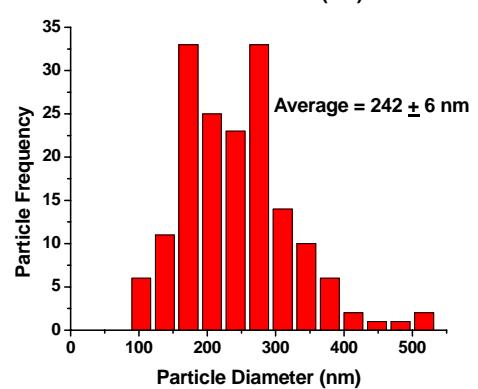
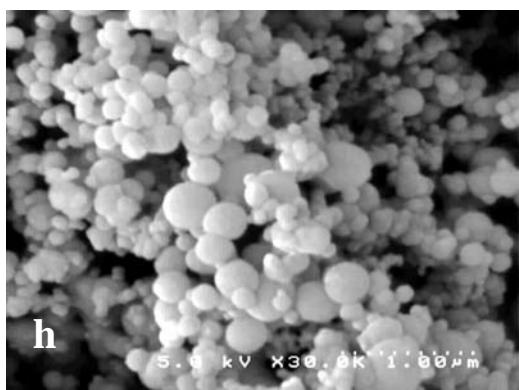
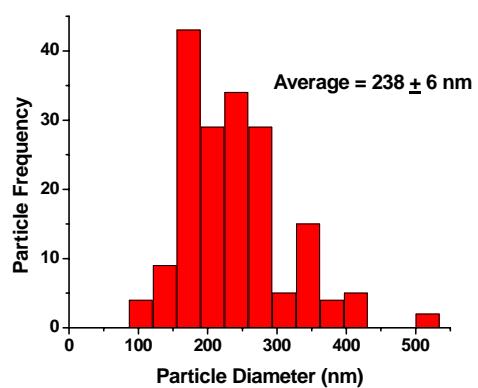
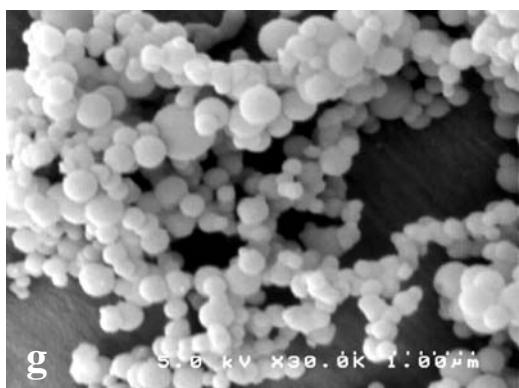
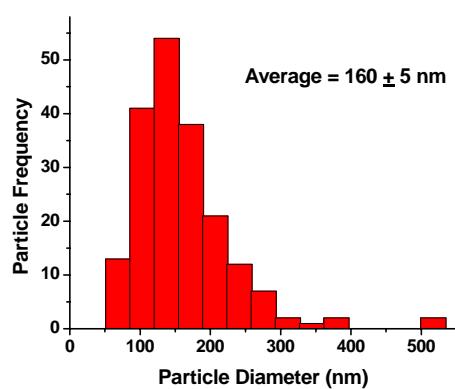
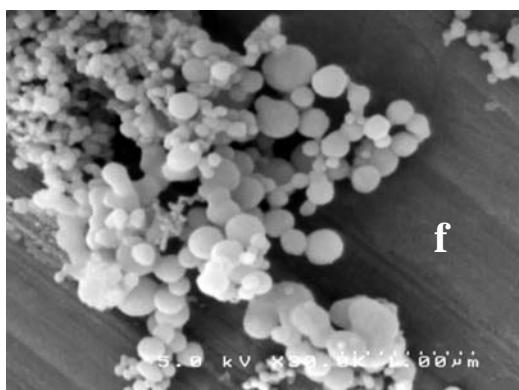
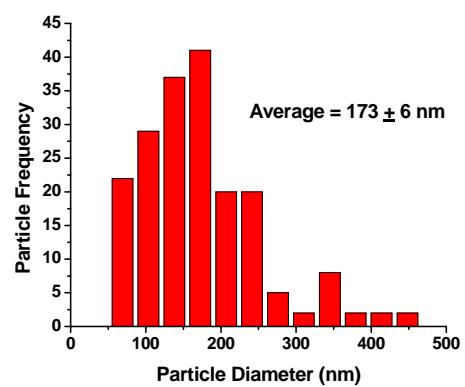
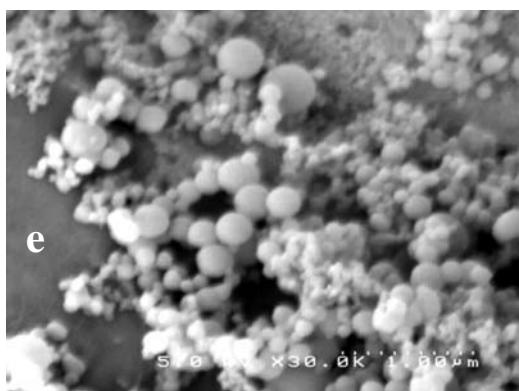
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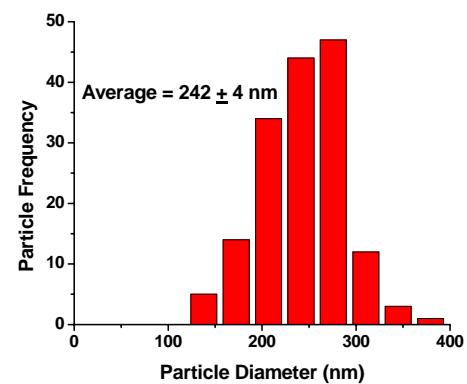
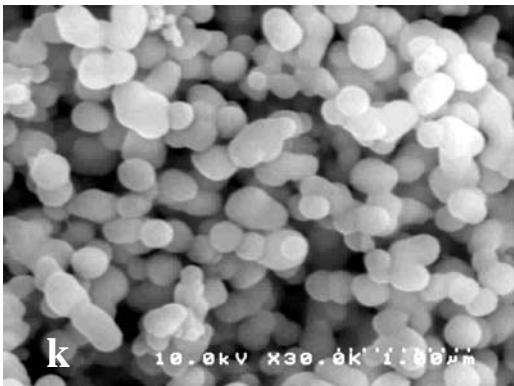
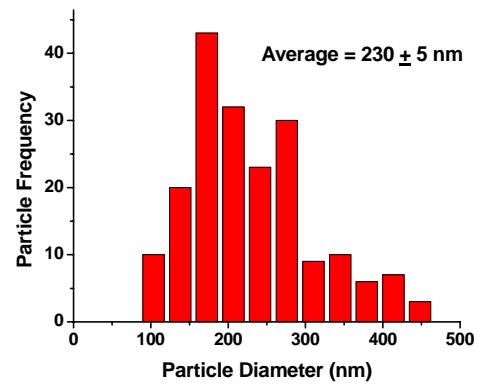
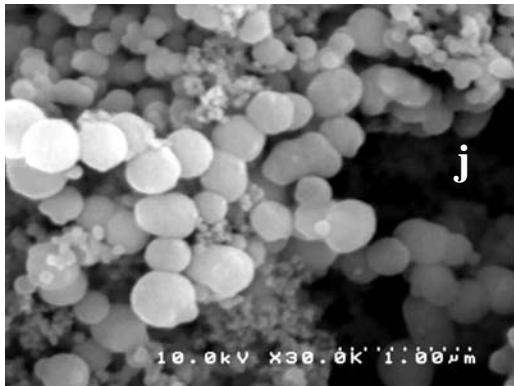
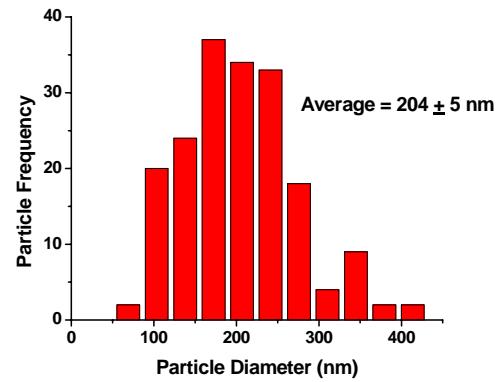
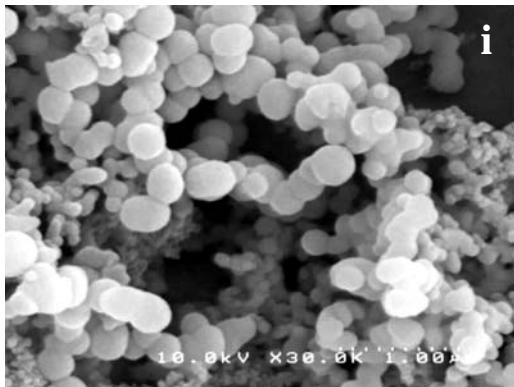




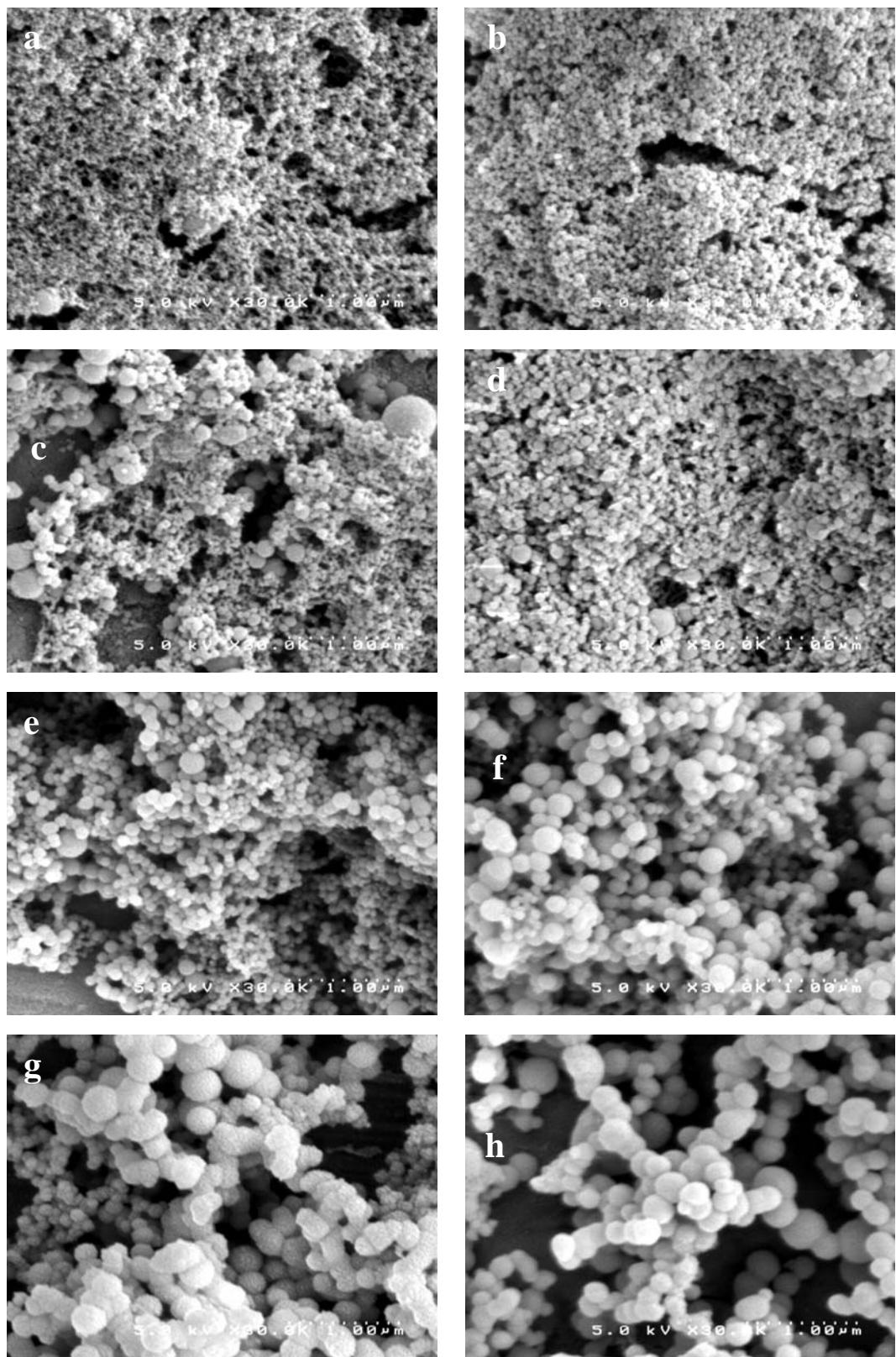
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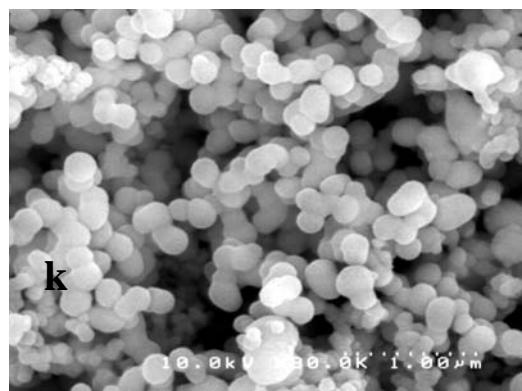
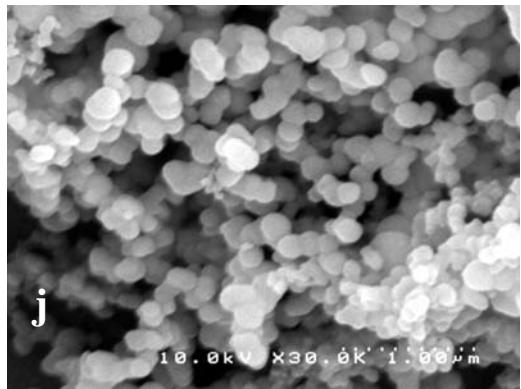
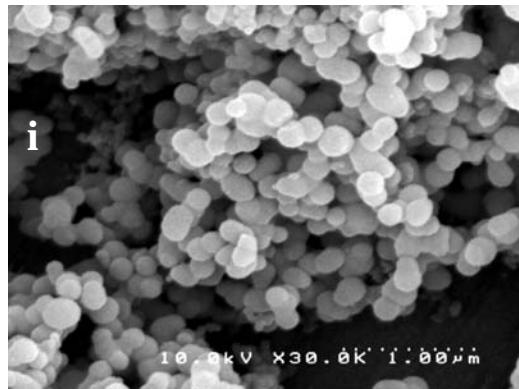




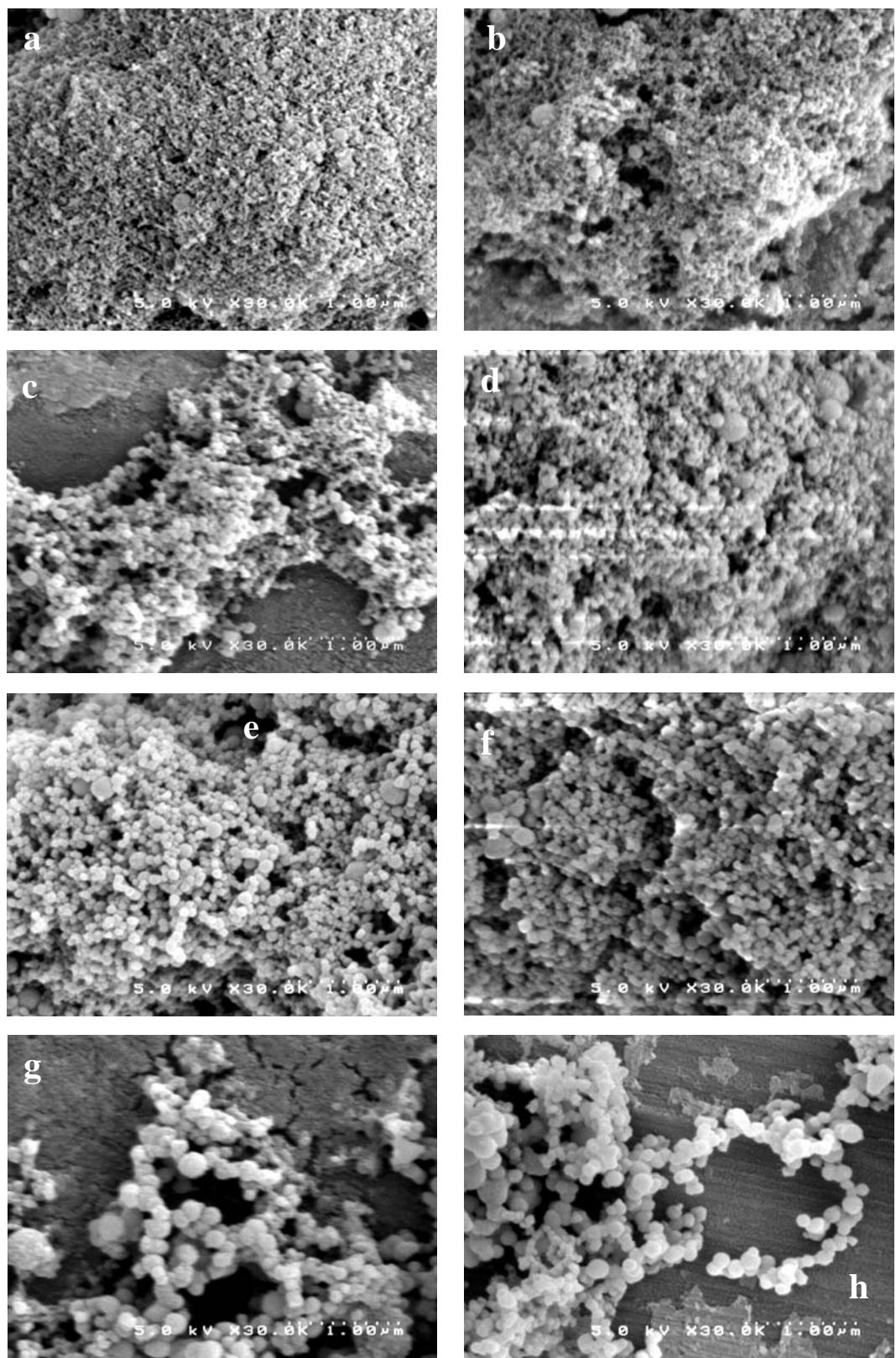


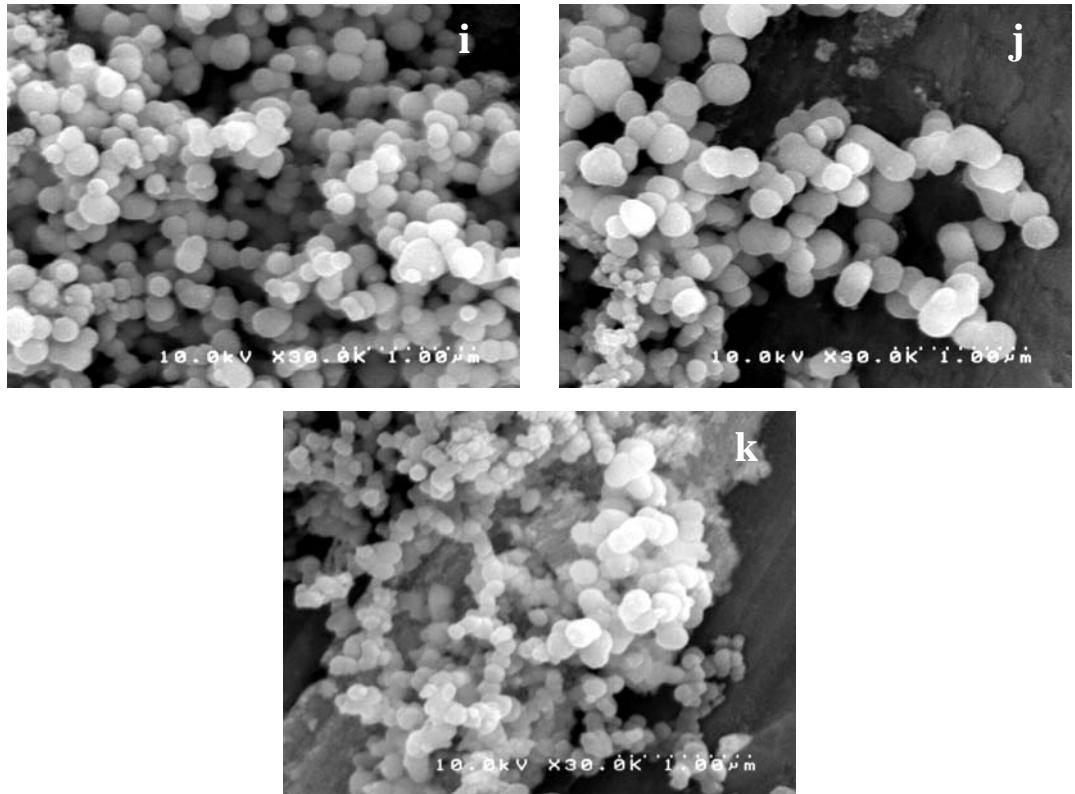
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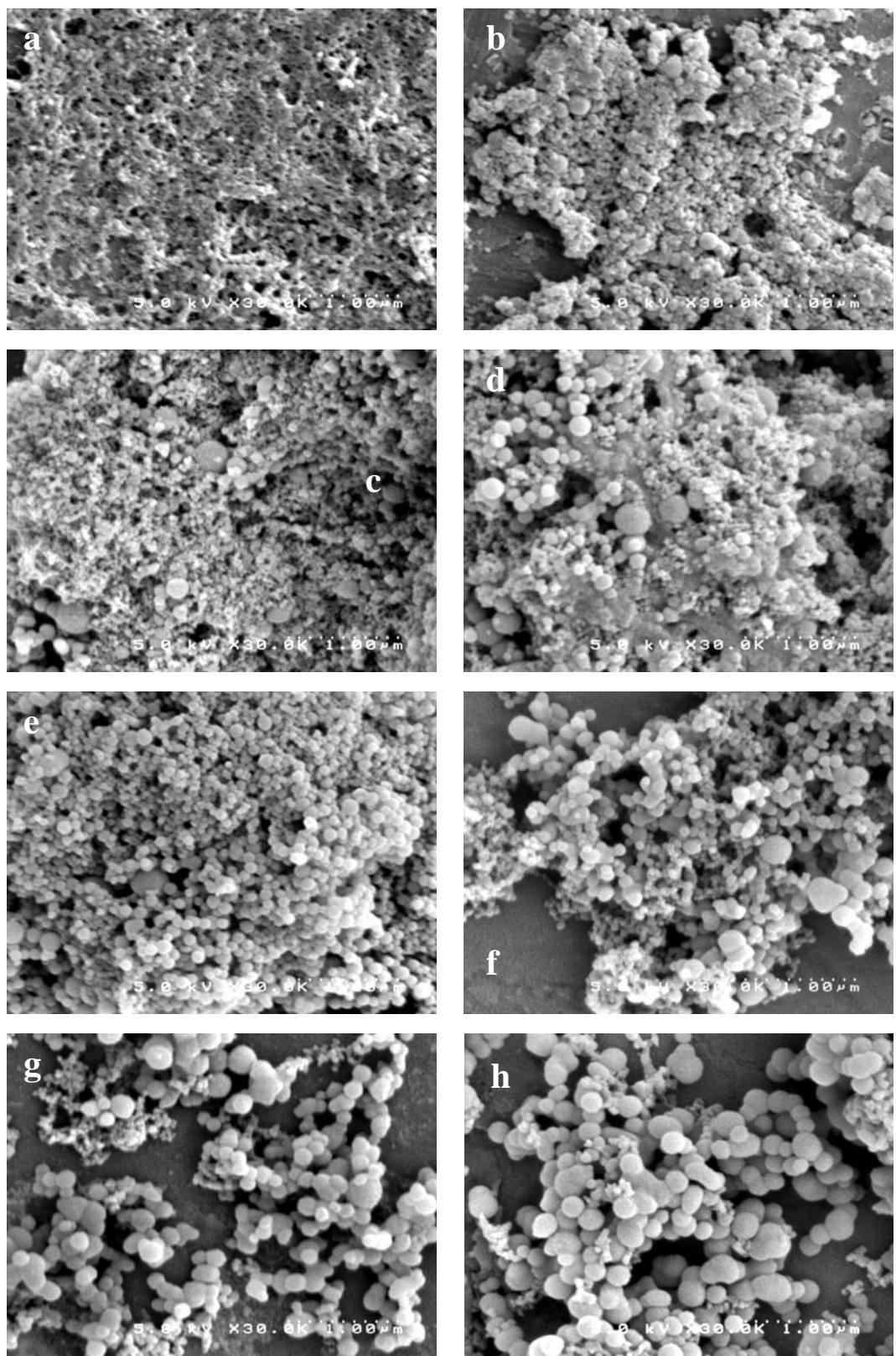


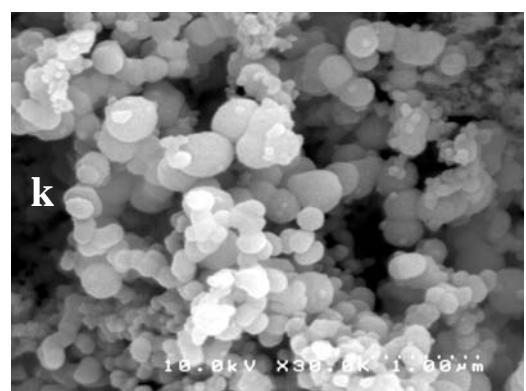
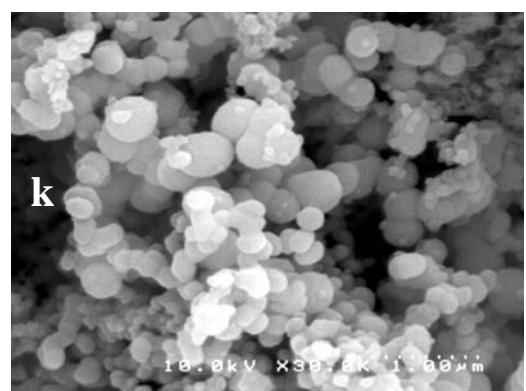
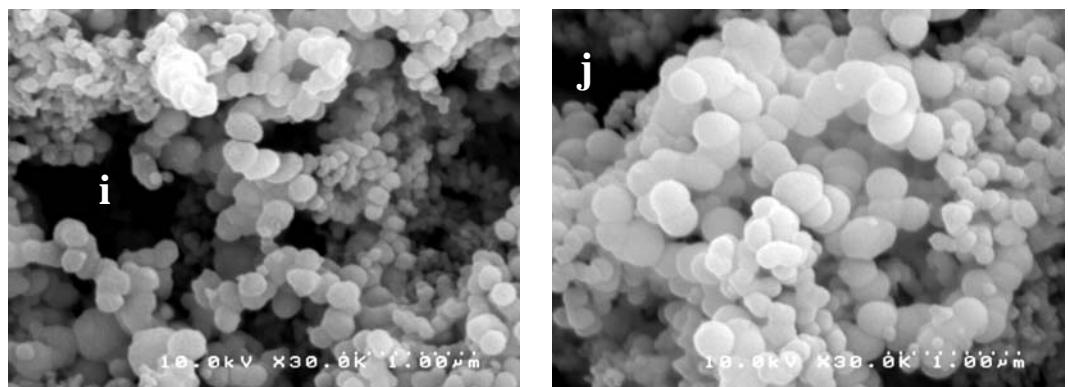
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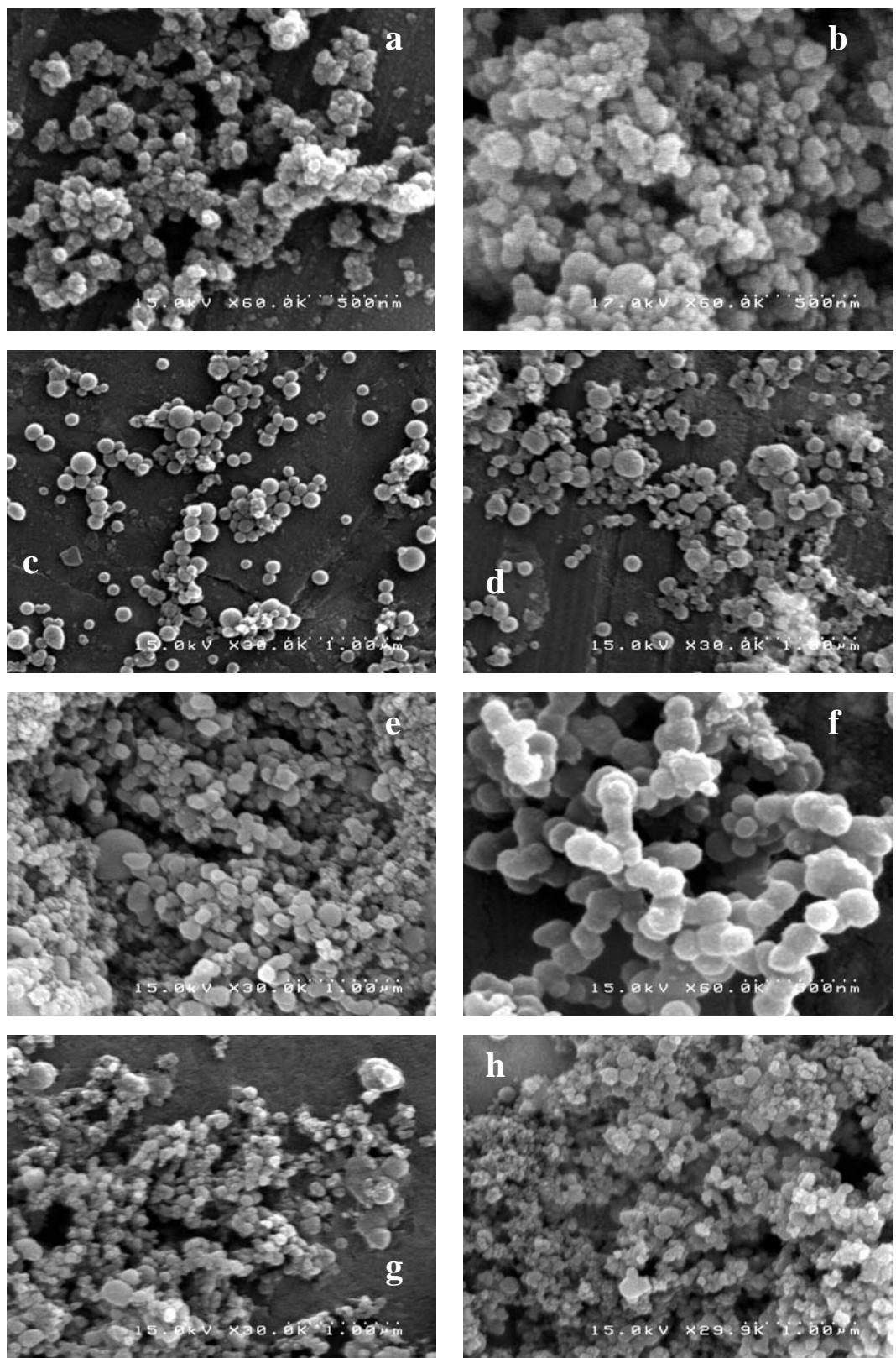


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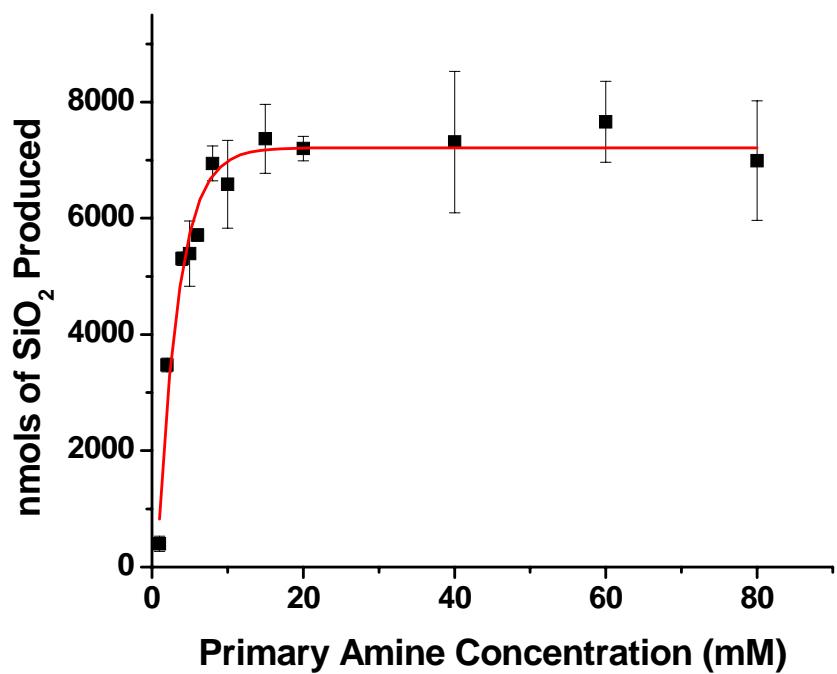




S.19.



S.20.



S.21.

