

## Supporting Information

### Stimuli Response of Reduction-Sensitive Dendrimers Revealed by Diffusion and NOE NMR Studies

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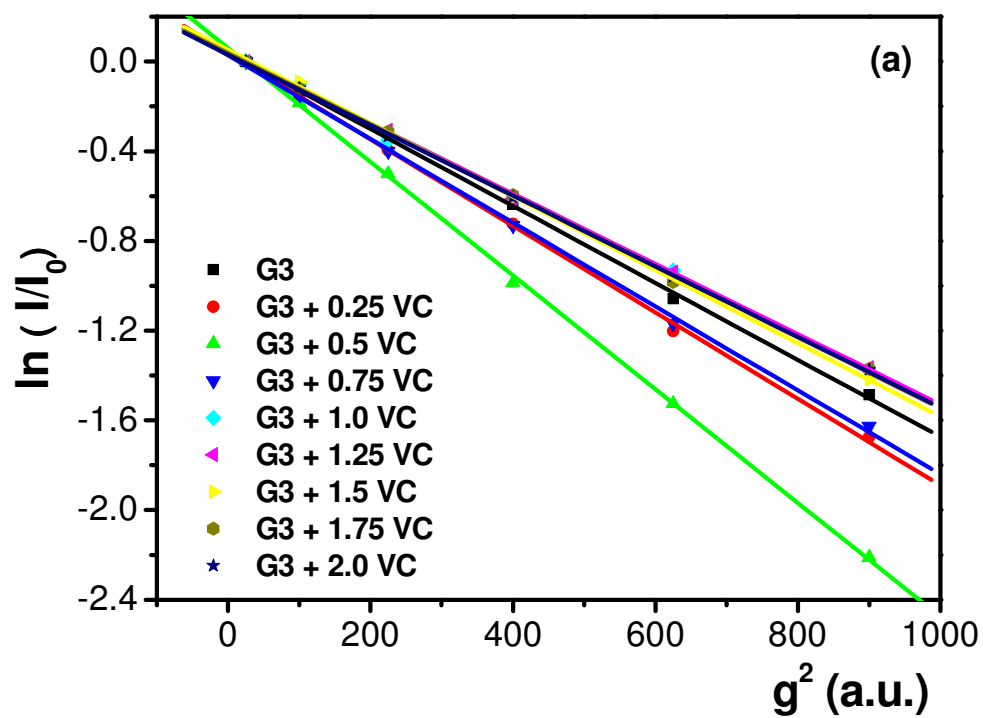
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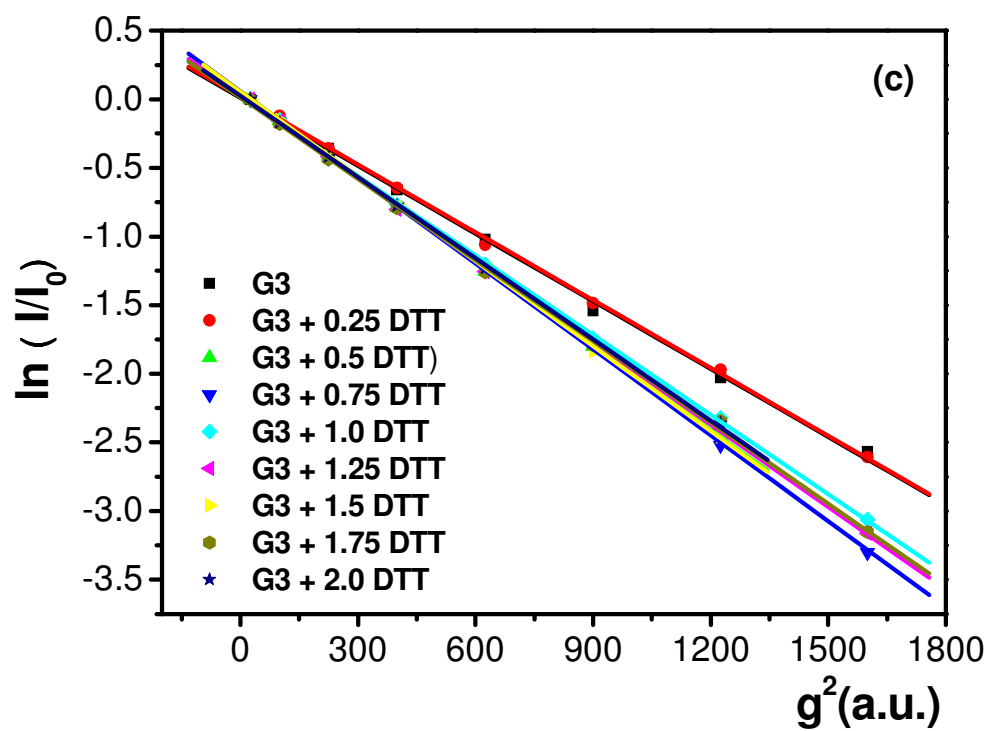
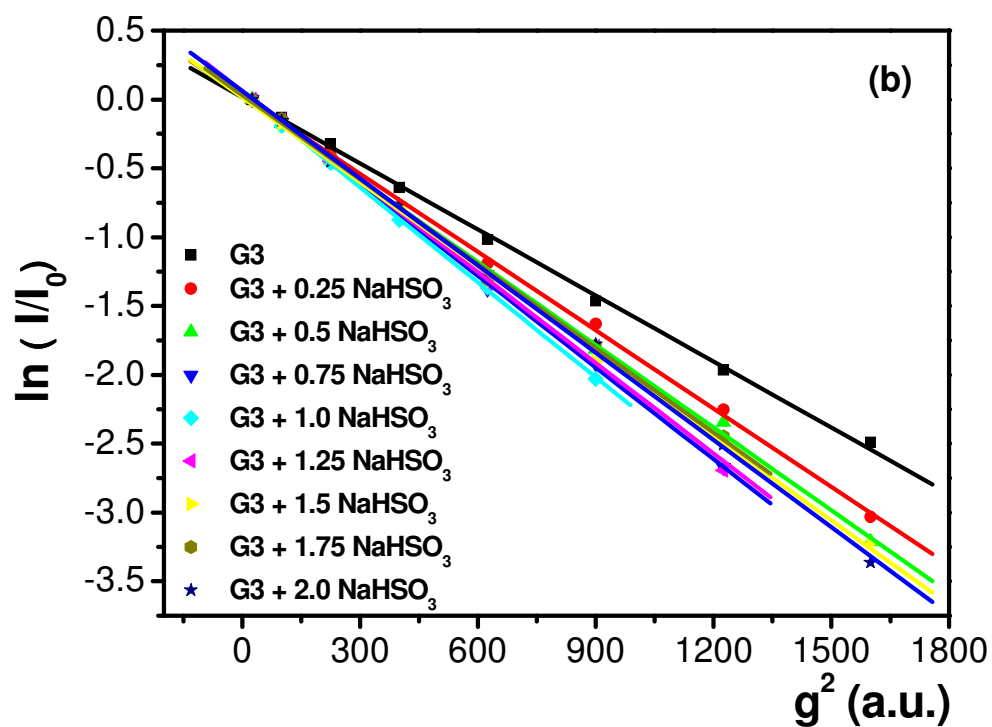
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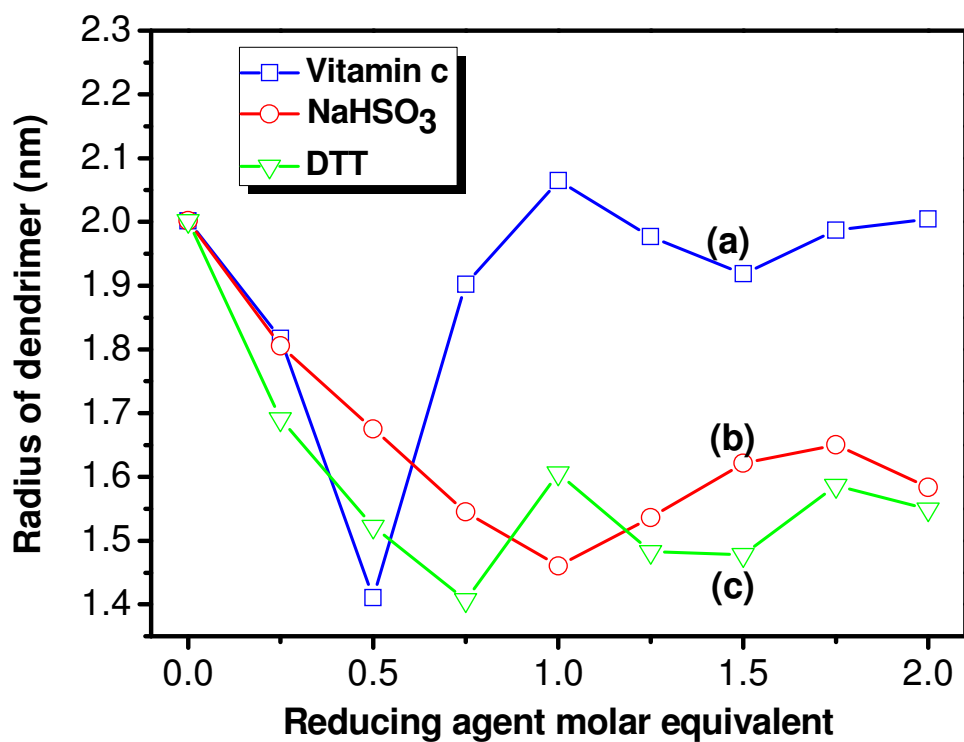
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**Figure S1.** Typical plots of the observed intensity changes [ $\ln(I/I_0)$ ] of G3 cystamine-core PAMAM dendrimer, as a function of  $g^2$  in the presence of different amounts of reducing agents (a) VC, (b)  $\text{NaHSO}_3$ , and (c) DTT.

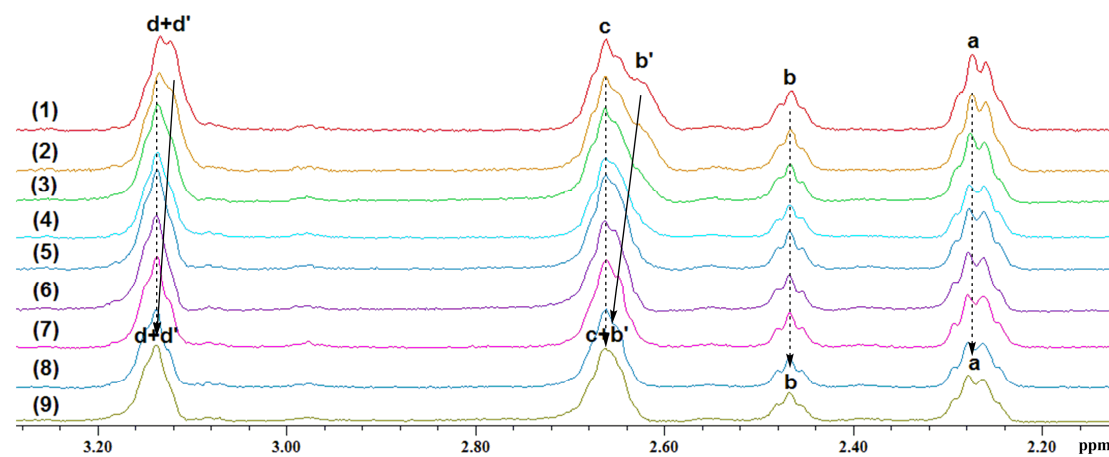




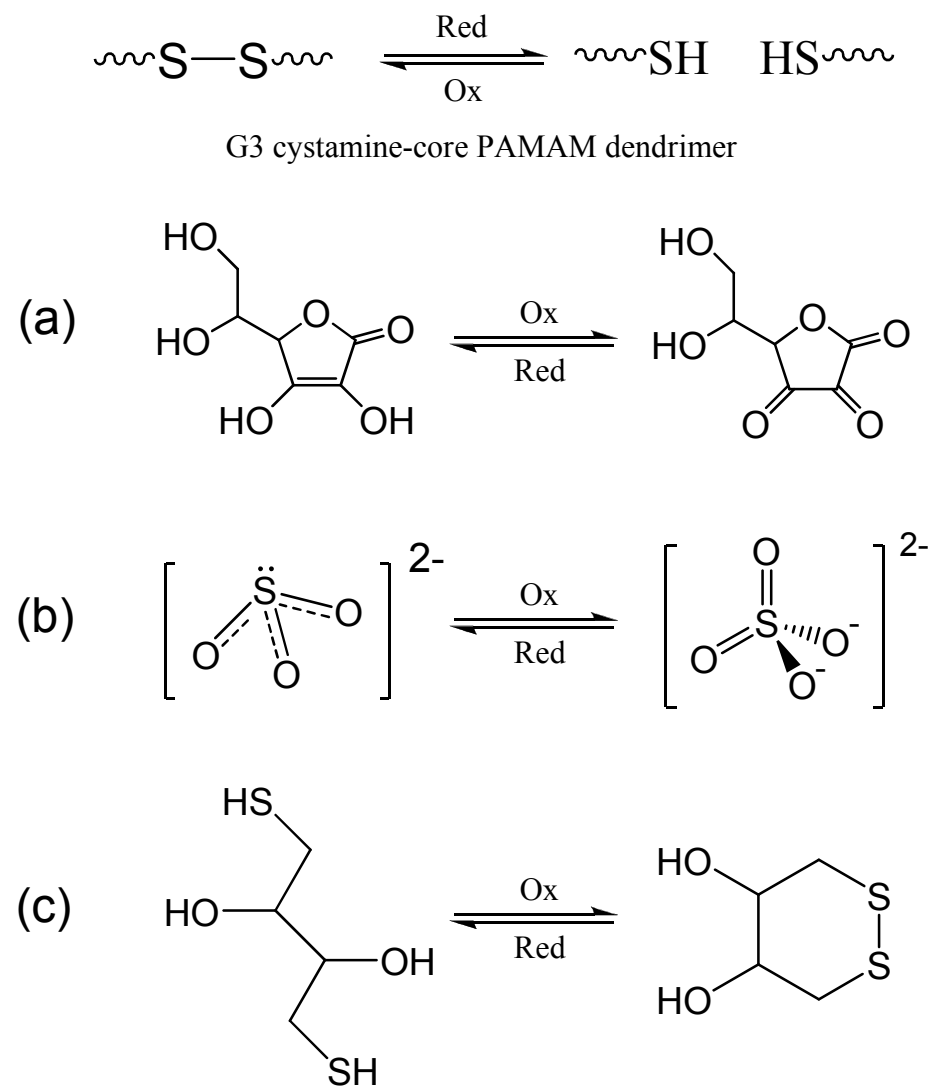
**Figure S2.** Hydrodynamic radius of G3 cystamine-core PAMAM dendrimer in the presence different reducing agents as a function of reducing agent/dendrimer molar ratio, (a) VC, (b) NaHSO<sub>3</sub>, and (c) DTT.

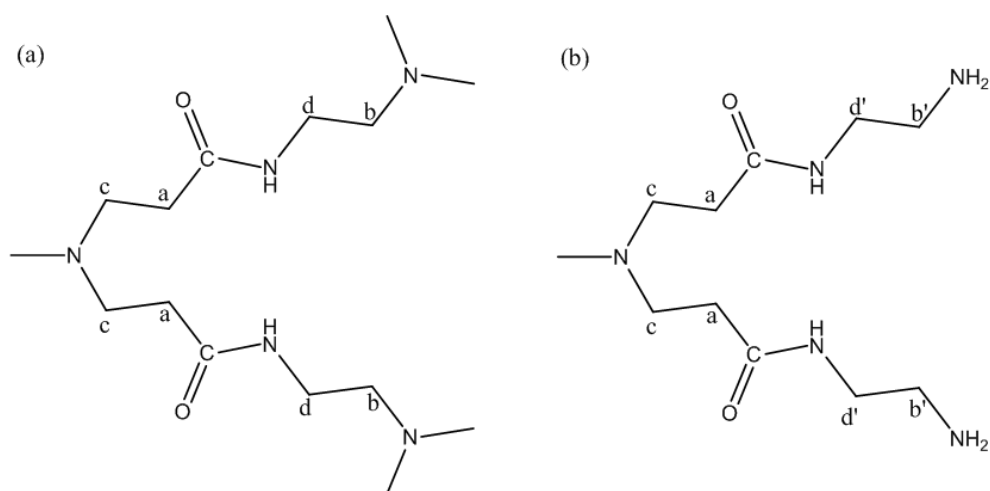


**Figure S3.** Expanded region of the  $^1\text{H}$  NMR spectra for G3 cystamine-core PAMAM dendrimer/DTT/ $\text{D}_2\text{O}$  solution, the ratio of reducing agent/dendrimer are 0, 0.25, 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2. (1~9)



**Scheme S1.** Molecular structures of the reducing agents and their redox reactions with disulfide linkages, (a) VC, (b) NaHSO<sub>3</sub>, and (c) DTT.





**Scheme S2.** Chemical structure and proton labeling of G3 cystamine-core PAMAM dendrimer: (a) interior repeated unit of G3 cystamine-core PAMAM dendrimer, and (b) outmost layer of G3 cystamine-core PAMAM dendrimer with surface functionalities.