

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Raman study of CaDNA films as a function of water content and excess CaCl₂ concentration: Stability of the B conformation. MEGAN SCHWENKER, University of Toledo, ROBERT MARLOWE, University of Tennessee at Chattanooga, SCOTT LEE, University of Toledo, ALLAN RUPPRECHT, University of Stockholm — Highly oriented, wet-spun films of CaDNA expand in the direction perpendicular to the helical axis as the hydration of the film is increased. CaDNA films with a high CaCl₂ content show an unexpected shrinkage at a relative humidity of about 93%. We have performed Raman experiments on CaDNA films as a function of both water content and excess CaCl₂ concentration in order to determine if this unexpected shrinkage might be related to a conformational transition of the DNA molecules. We find that the DNA molecules remain in the B conformation for all salt contents down to a relative humidity of 59%.

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Date submitted: 22 Nov 2005

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