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Characterization via Atomic Force Microscopy of Discrete Plasticity in Collagen Fibrils from Mechanically Overloaded Tendons: Nano-Scale Structural Changes Mimic Rope Failure

Samuel J. Baldwin, Laurent Kreplak, J. Michael Lee



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Characterization via Atomic Force Microscopy of Discrete Plasticity

in Collagen Fibrils from Mechanically Overloaded Tendons: Nano-Scale Structural Changes Mimic Rope Failure

Samuel J. Baldwin^a, Laurent Kreplak^a, and J. Michael Lee^b*

- a. Department of Physics and Atmospheric Science, Dalhousie University, Halifax, NS, Canada.
- b. School of Biomedical Engineering and Department of Applied Oral Sciences, Dalhousie University, Halifax, NS, Canada

^{*}To whom correspondence should be addressed:

Professor J. Michael Lee

School of Biomedical Engineering, Dalhousie University 5981 University Avenue PO BOX 15000 Halifax, NS Canada B3H 4R2

Tel: 902-494-6734 Fax: 902-494-6621 E-mail: michael.lee@dal.ca

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ABSTRACT

Tendons exposed to tensile overload show a structural alteration at the fibril scale termed discrete plasticity. Serial kinks appear along individual collagen fibrils that are susceptible to enzymatic digestion and are thermally unstable. Using atomic force microscopy we mapped the

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