

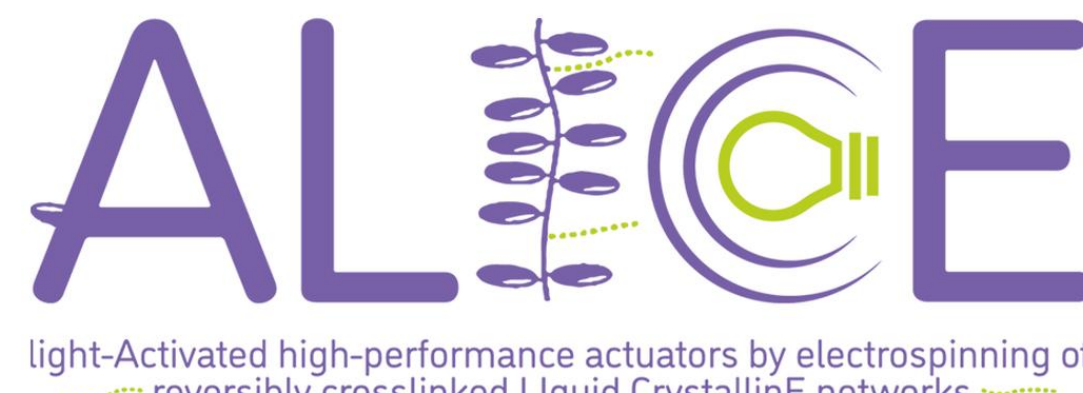


ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Polymeric Liquid Crystalline Actuators via Electrospinning coupled with Photocuring

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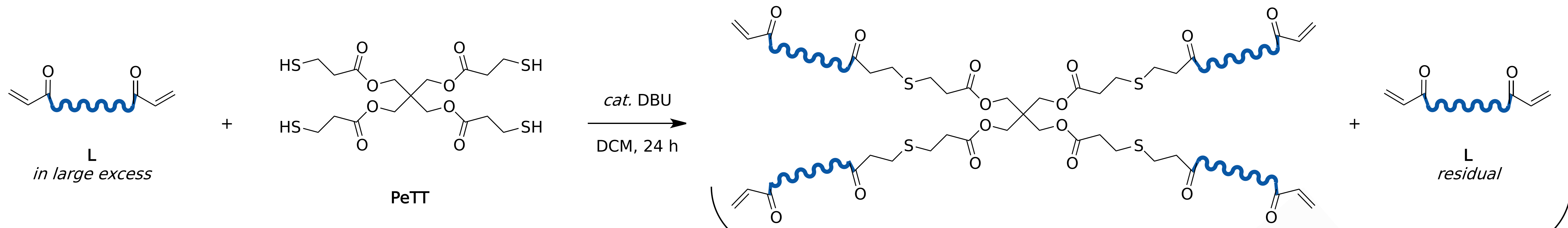
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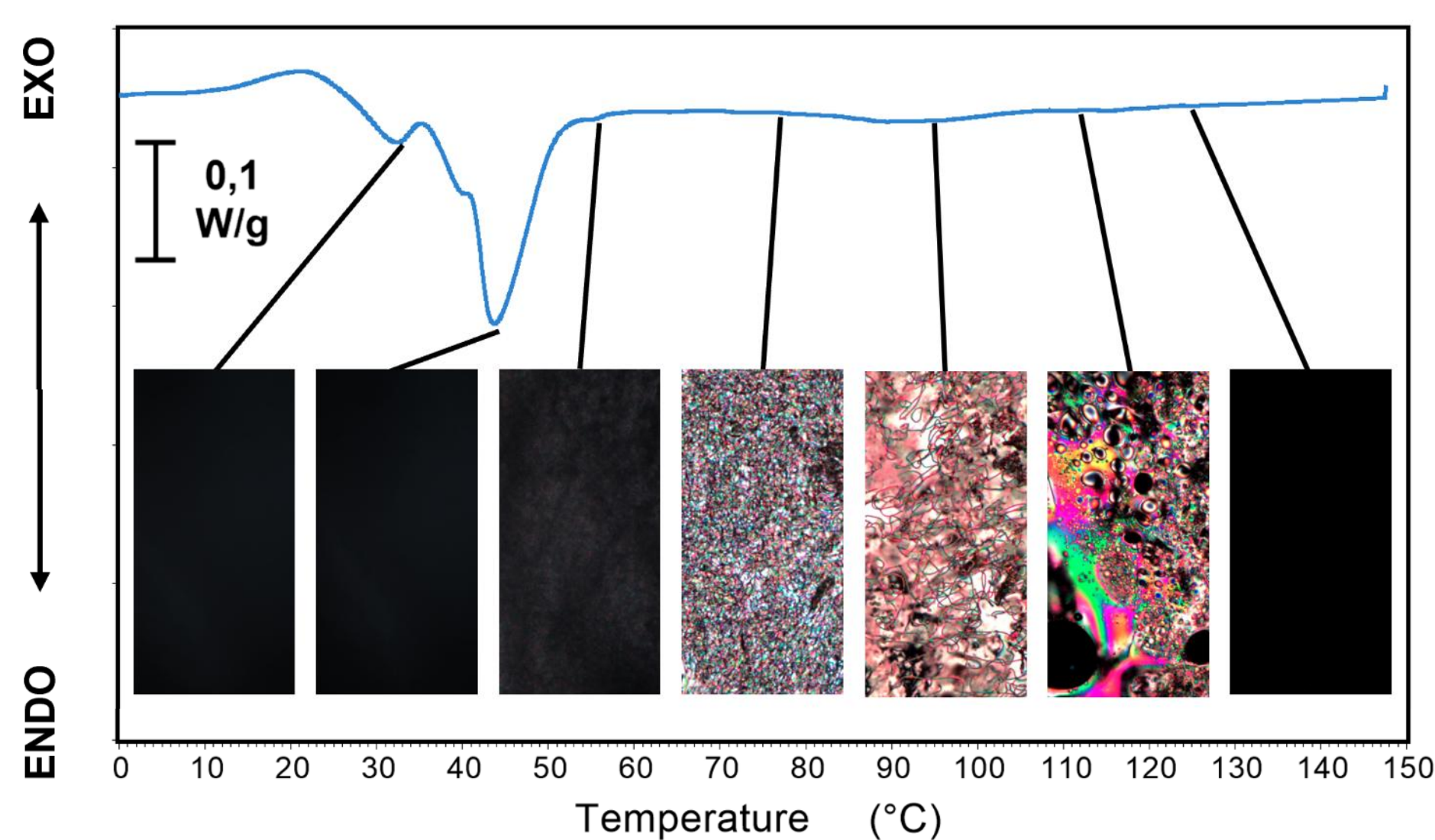
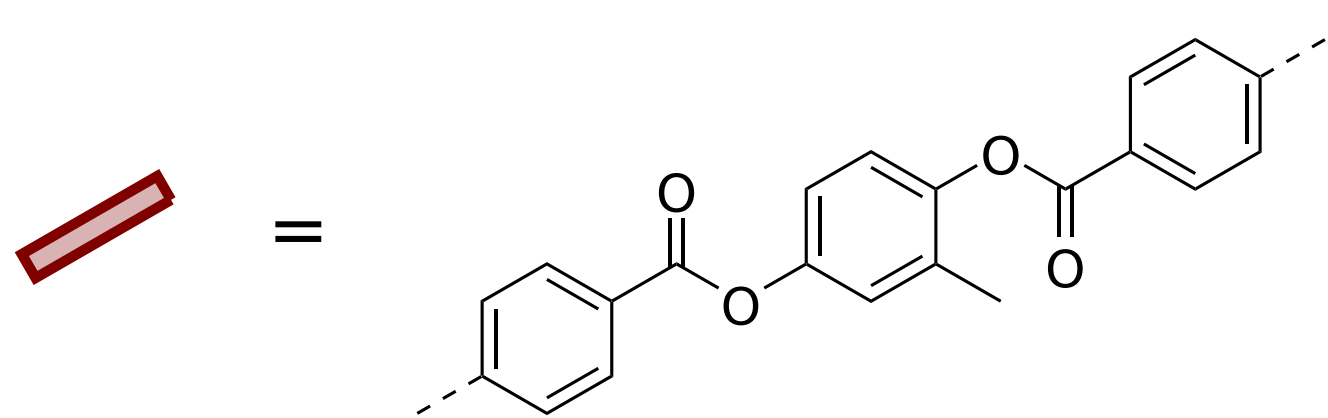
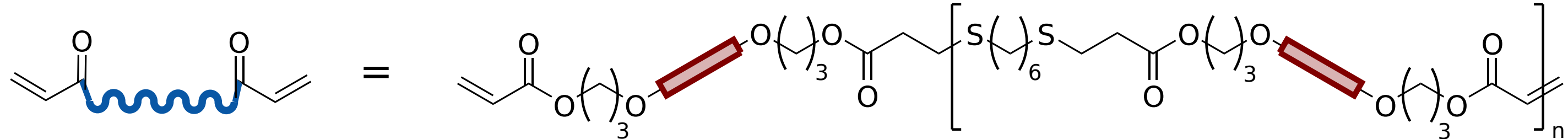
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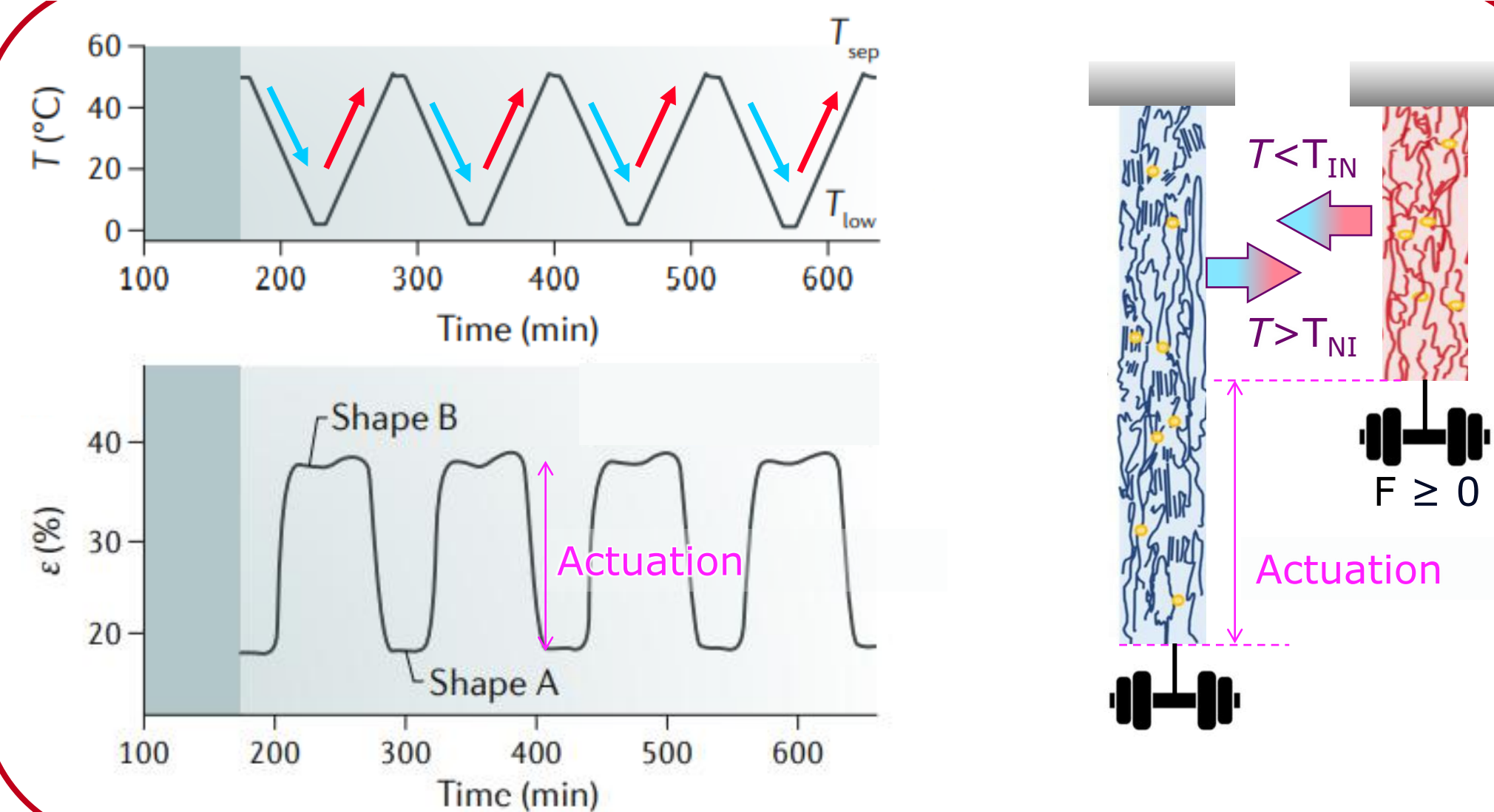
Synthesis



Where:

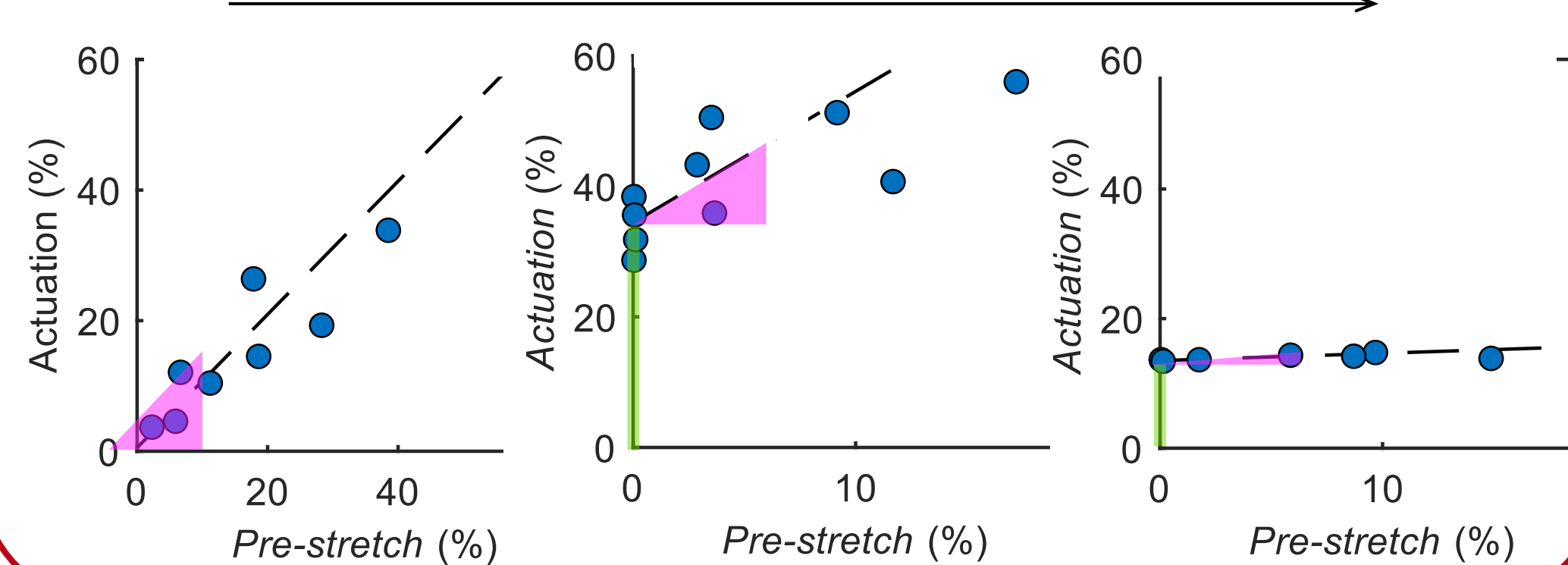


Characterization of the Actuation behavior

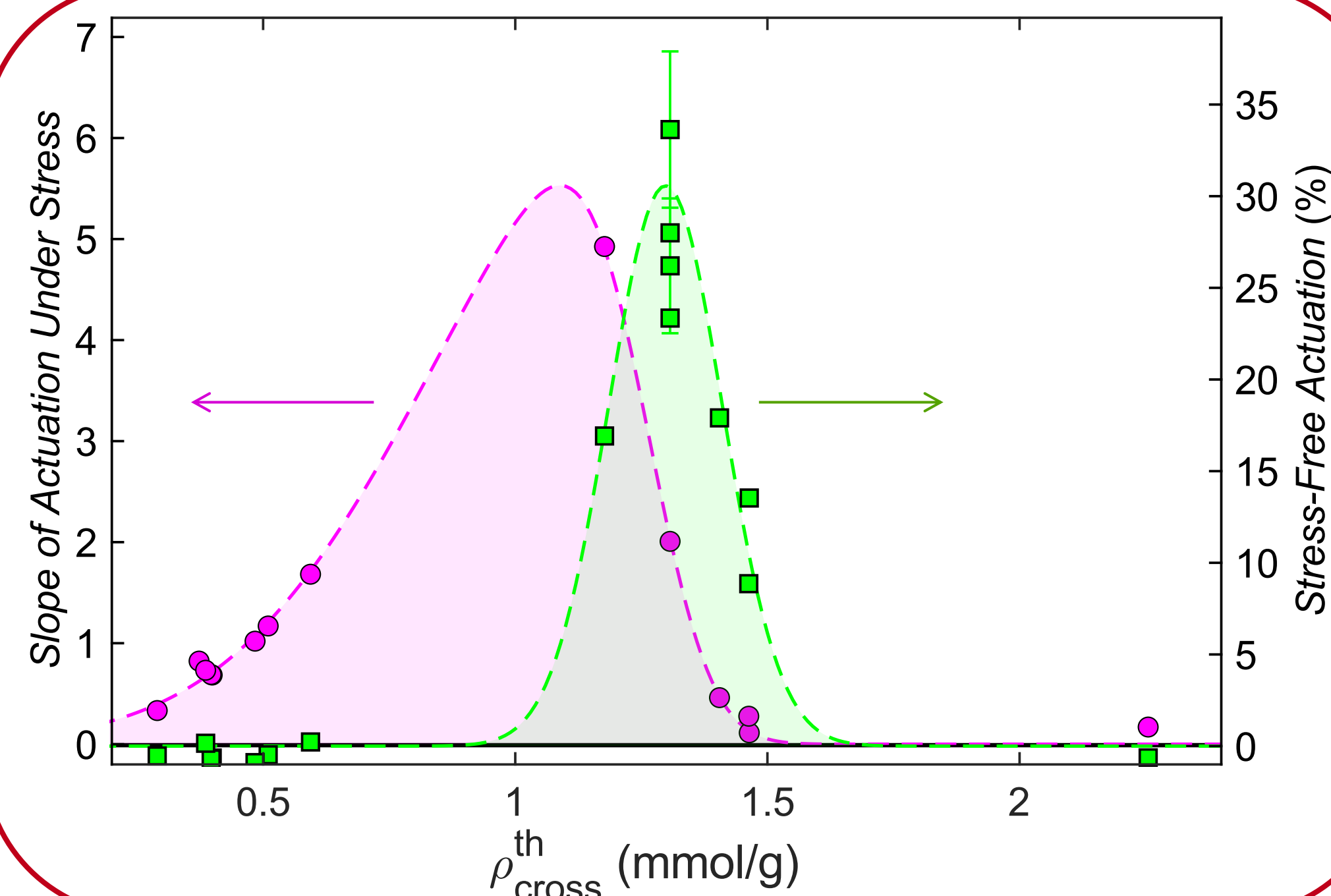


Over several samples

Increasing crosslink density ($\rho_{\text{cross}}^{\text{th}}$)



To determine the optimal $\rho_{\text{cross}}^{\text{th}}$

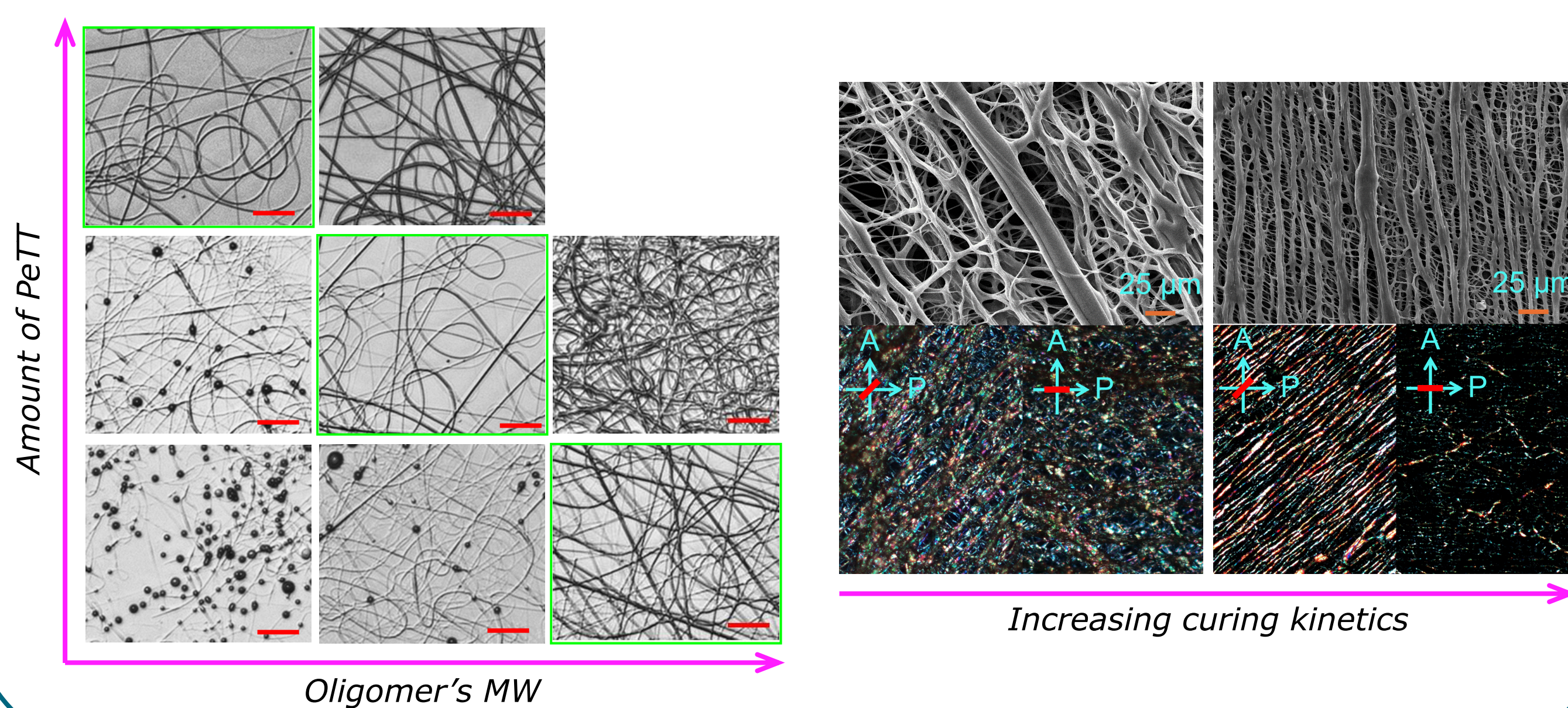


Process optimization

Ensure **spinnability**

and

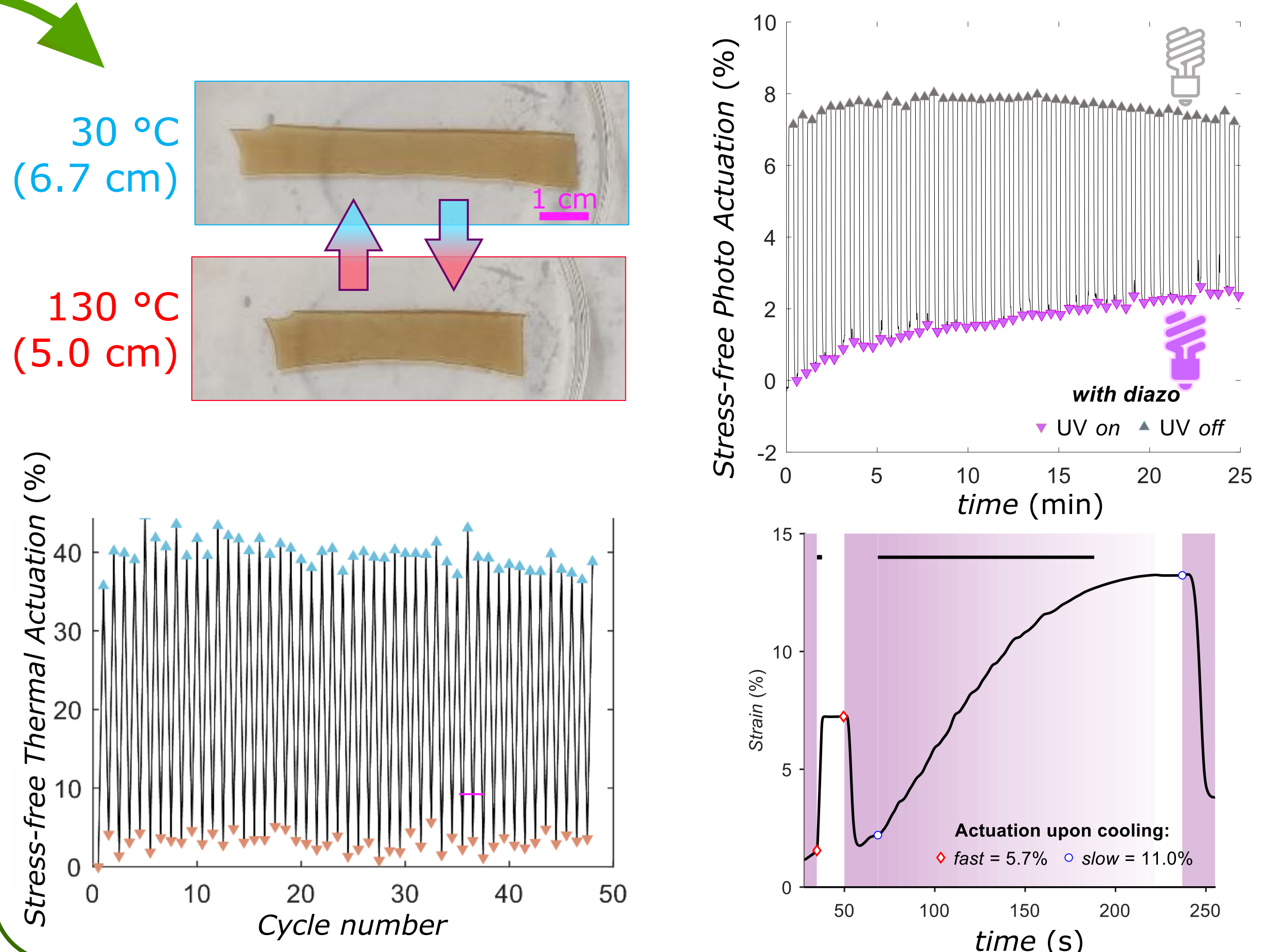
Mesogen **alignment**



test over multiple cycles

Thermal stimulus

Light stimulus



Fundings: European Union - NextGenerationEU under the National Recovery and Resilience Plan (PNRR) - Mission 4 Education and research - Component 2 From research to business - Investment 1.1 Notice Prin 2022 - DD N. 104 del 02/02/2022, from the project "ALICE - light-Activated high-performance actuators by electrospinning of reversibly crosslinked LIquid CrystallinE networks", proposal code 20224EBZ3Y - CUP J53D23008450006.

