

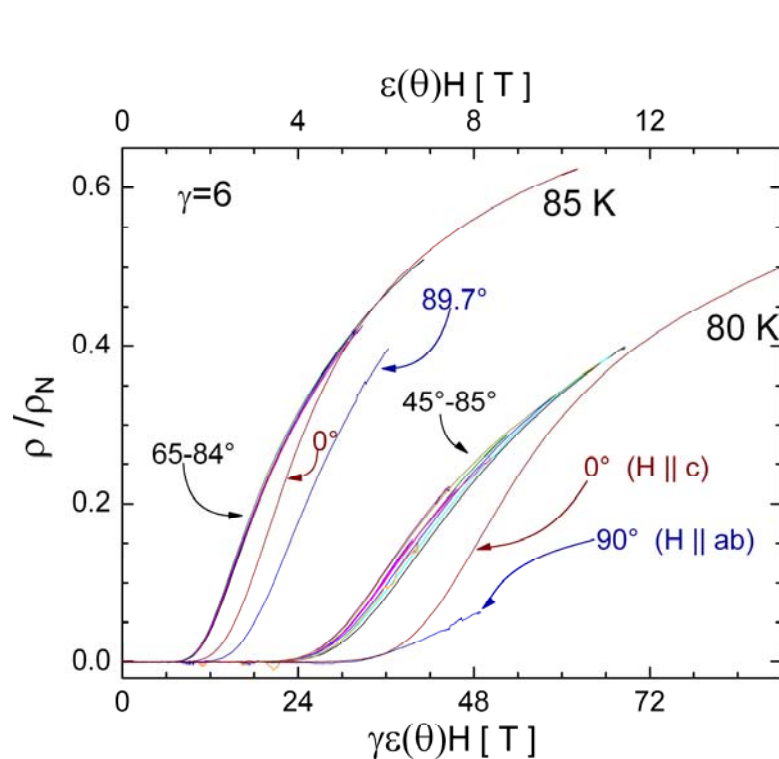
Smectic Vortex Phase in Optimally Doped $\text{YBa}_2\text{Cu}_3\text{O}_7$ Thin Films

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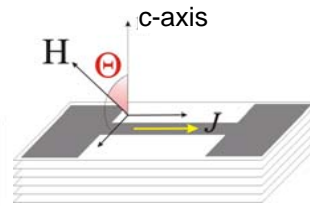
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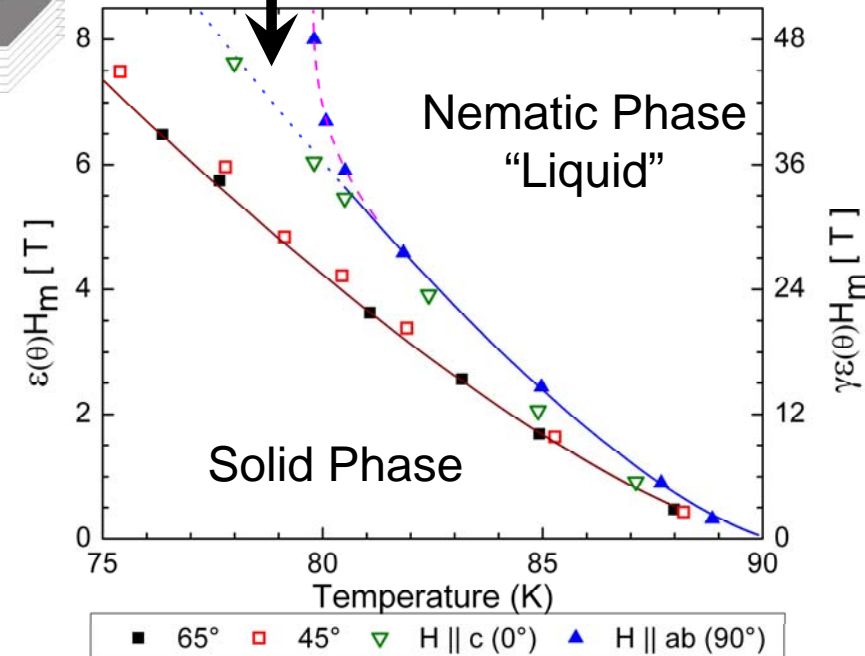


Up to 50 T

- Anisotropic scaling at intermediate angles
- Correlated pinning near the crystalline axes



Smectic Phase
(Liquid-Crystal)



Vortex melting indicates the emergence of a smectic phase for $T < 80\text{K}$ for $H > 40\text{T}$ with $H \parallel ab$.

The layered structure of $\text{YBa}_2\text{Cu}_3\text{O}_7$ leads to the formation of a smectic vortex phase.

Angular dependent transport in the 50 T pulsed magnet, NHMFL-LANL.
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