

## Highlights

Activity F - [Electronic and thermal transport from the nanoscale to the macroscale](#) - 2021

### Anyons in quantum Hall interferometry

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The quantum Hall effect is a unique playground to exploit quantum coherence of electrons for various applications, from metrology to quantum computation. A Review article by Cnr SPIN and CNR NANO researchers gives a survey of the main results achieved in Quantum Hall interferometry.

The review article “Anyons in quantum Hall interferometry” has been published on the journal Nature Reviews Physics in 2021.

In the paper, researchers focus their attention on anyons, emergent quasiparticles that are neither bosons nor fermions and possess fractional statistics. The fractional statistics, in particular, has attracted a lot of interest in view of potential applications in topological quantum computation.

The review offers a survey on the two mainly investigated interferometric setups, showing their basic working principles, fabrication issues and the main results achieved so-far, including the first observation of fractional statistics for Laughlin fractional quantum Hall states.

