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(author F. D. M. Haldane) IS NOT SCHEDULED TO  
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### **Topological States of Quantum Condensed Matter<sup>1</sup>**

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Over the past three decades or more, it has slowly emerged that many unexpected properties of the ground states of certain condensed matter systems are protected by robust non-trivial topological properties of their quantum entanglement, with consequences such as characteristic inevitably-present edge states. Early work exposed such properties in one and two-dimensional systems and the discovery of 3D topological insulators finally completed dimensional coverage. Interest in topological states has grown as some of them are thought to be potential platforms for quantum information processing. I will describe some selected examples of topological states of matter and the history of their discovery.

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