

# Few-body Physics in a Many-Body World

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The study of quantum mechanical few-body systems is a century old pursuit relevant to countless subfields of physics. While the two-body problem is generally considered to be well-understood theoretically and numerically, venturing to three or more bodies brings about complications but also a host of interesting phenomena. In recent years, the cooling and trapping of atoms and molecules has shown great promise to provide a highly controllable environment to study few-body physics. However, as is true for many systems where few-body effects play an important role the few-body states are not isolated from their many-body environment. An interesting question then becomes if or (more precisely) when we should consider few-body states as effectively isolated and when we have to take the coupling to the environment into account. Using some simple, yet non-trivial, examples I will try to suggest possible approaches to this line of research.

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