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**Identifying the local conserved quantities in Many-Body-Localized matter** DAVID PEKKER, BINBIN TIAN, University of Pittsburgh, XIONGJI YU, BRYAN CLARK, UIUC, VADIM OGANESYAN, CUNY — Typically, many-body systems with interactions tend to thermalize. However, adding sufficient disorder (or possibly via other mechanisms) one can induce many-body localization. The localization occurs by the spontaneous appearance of local conserved quantities. We describe how to identify these conserved quantities and explore their localization properties. We also comment on how these conserved quantities are reflected in cold atom experiments on localized matter.

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