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Paolo Mantero* (pmantero@uark.edu), **Cleto B. Miranda-Neto** and **Uwe Nagel**. *Some results and questions about symbolic powers of ideals*. Preliminary report.

In this talk we will survey some recent results and questions about symbolic powers of ideals in Noetherian Cohen-Macaulay rings. For instance, we give a multiplicity-based characterization for the m -th symbolic power $I^{(m)}$ of an ideal I . We will also provide a saturation-type expression for $I^{(m)}$, as well as an explicit effective formula for the symbolic square $I^{(2)}$. This formula allows us to prove a special case of a conjecture by Eisenbud and Mazur. Finally, we raise a conjecture connecting symbolic defects to Jacobian ideals. . (Received August 16, 2021)