

## Galactic and cosmic chemical evolution from carbon to uranium

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Elemental abundances and isotopic ratios of stars in the Milky Way Galaxy have provided stringent constraints on the formation and evolutionary history of the Galaxy. It is now possible to apply this Galactic archaeology approach for other galaxies where elemental abundances of stellar populations can be measured within galaxies with IFU surveys. I will give an overview of Galactic and cosmic chemical enrichment using my chemodynamical simulations. At the early stage of galaxy formation, chemical enrichment took place inhomogeneously. With the inhomogeneous enrichment, stars with long delay-times such as asymptotic giant branch (AGB) stars and neutron star mergers (NSMs, the gravitational wave source) can contribute at low metallicities. We then reproduce the observed N/O-O/H relations with AGB stars only, without rotation of stars. However, we find that NSMs alone are unable to explain the observed Eu abundances, but may be able to together with magneto-rotational supernovae. At the very beginning of the galaxy formation, the abundance fitting analysis showed that the chemical enrichment sources are different (faint supernovae/hypernovae), and I will discuss their contribution to galactic chemical evolution.

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### Talk/Poster

Talk

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