

# Chemical imprints in atmospheric abundance of stars with massive planets

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Stellar parameters of 25 stars with detected massive planets and abundances of 25 elements from Li to Eu, were investigated based on homogeneous high resolution spectra. The iron abundance [Fe/H] and key elements (Li, C, O, Mg, Si) indicative of the planet formation, as well as the dependencies of [El/Fe] on the condensation temperature ( $T_{\text{cond}}$ ), were analyzed. We found some interesting results: the mean values of C/O and [C/O] are  $\langle C/O \rangle = 0.48 \pm 0.07$  and  $\langle [C/O] \rangle = -0.07 \pm 0.07$ , slightly lower than solar ones; the Mg/Si ratios range from 0.83 to 0.95 for four stars in our sample and from 1.0 to 1.86 for the remaining 21 stars; various slopes of [El/Fe] versus  $T_{\text{cond}}$ . The dependencies of the planetary mass on metallicity, the lithium abundance, the C/O and Mg/Si ratios, and also on the [El/Fe]- $T_{\text{cond}}$  slopes were considered.