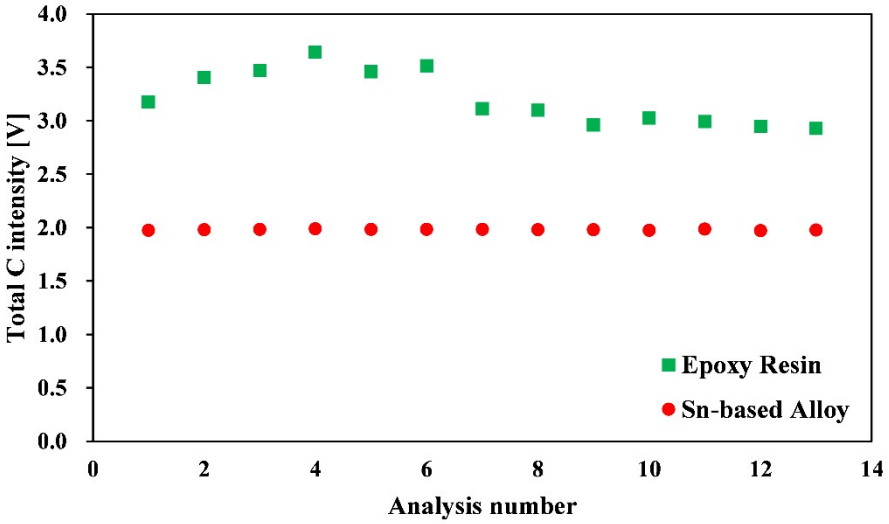

Fig. A The comparison on carbon background signal intensity using epoxy resin and Sn-based alloy.

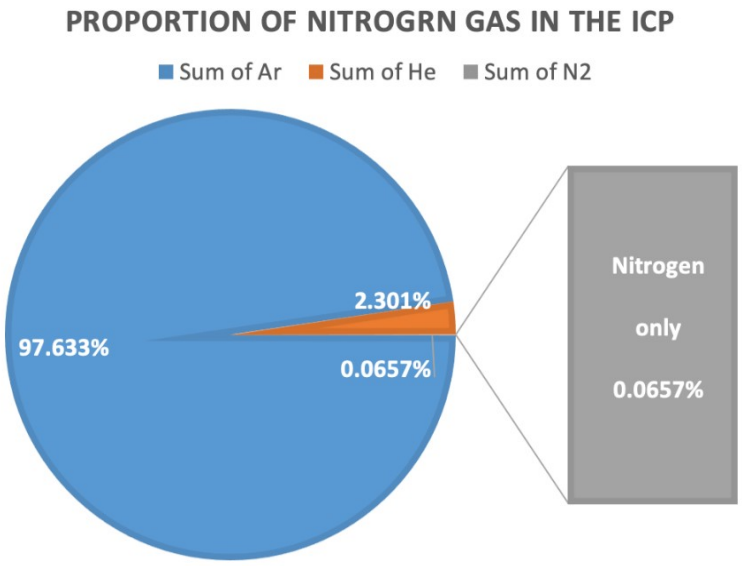

Fig. B Proportion of Nitrogen gas in the ICP

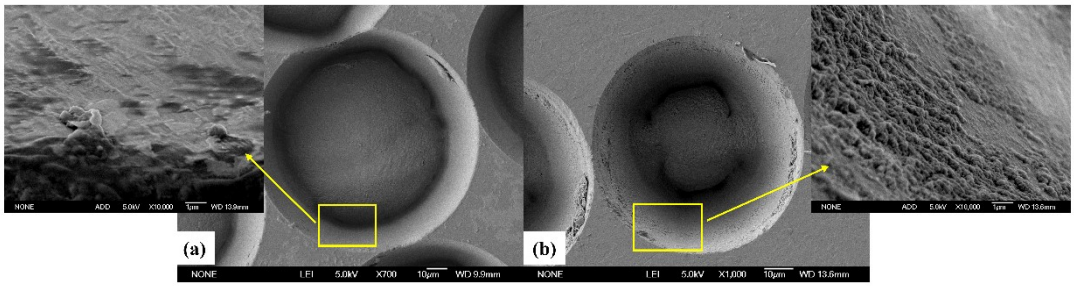

Fig. C The SEM images of the laser holes. (a) The SEM image of the natural diamond. (b) The SEM image of the HTHP diamond.

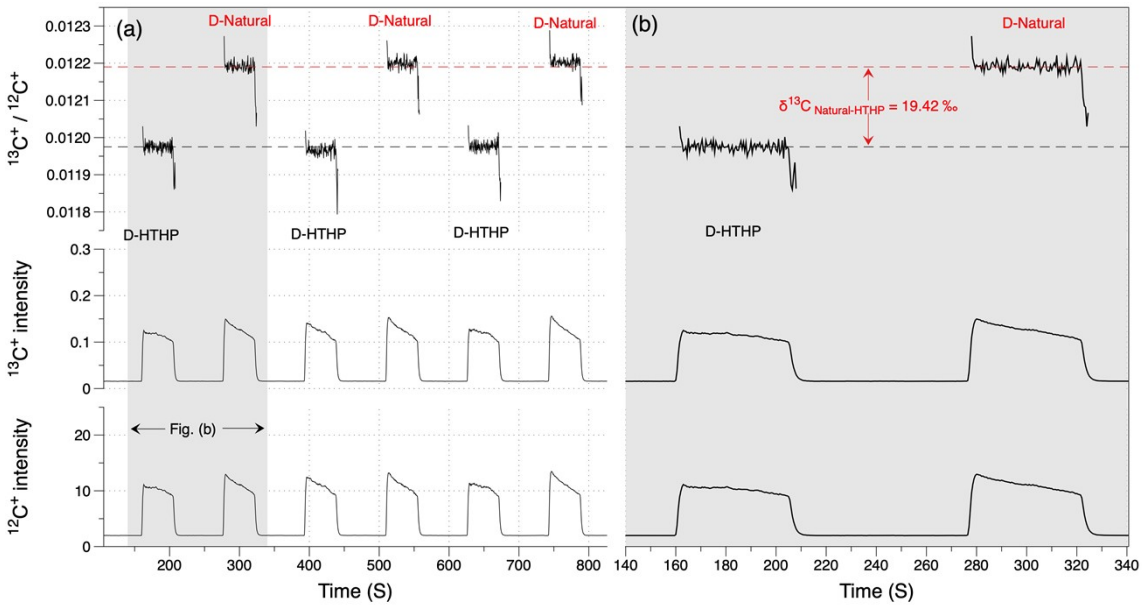

Fig. D TRA data for natural and HTHP diamonds with LA-MC-ICP-MS. Although the signal drift differently for natural and HTHP diamonds, no C-isotope fractionations were found neither in HTHP nor natural diamonds during the laser ablation process. Part of (a) was enlarged in (b).

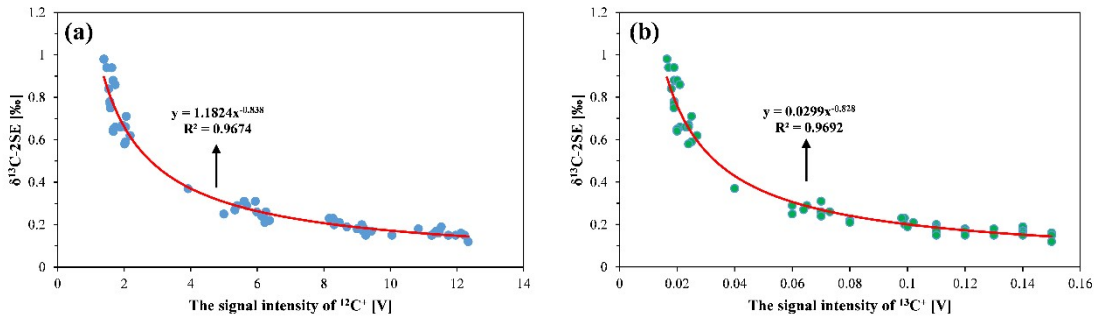

Fig. E The relationship between the internal precision (2SE) of $\delta^{13}C$ and the intensities of $^{12}C^+$ and $^{13}C^+$. (a): The relationship between the internal precision (2SE) of $\delta^{13}C$ and the intensities of $^{12}C^+$;(b) The relationship between the internal precision (2SE) of $\delta^{13}C$ and the intensities of $^{13}C^+$;

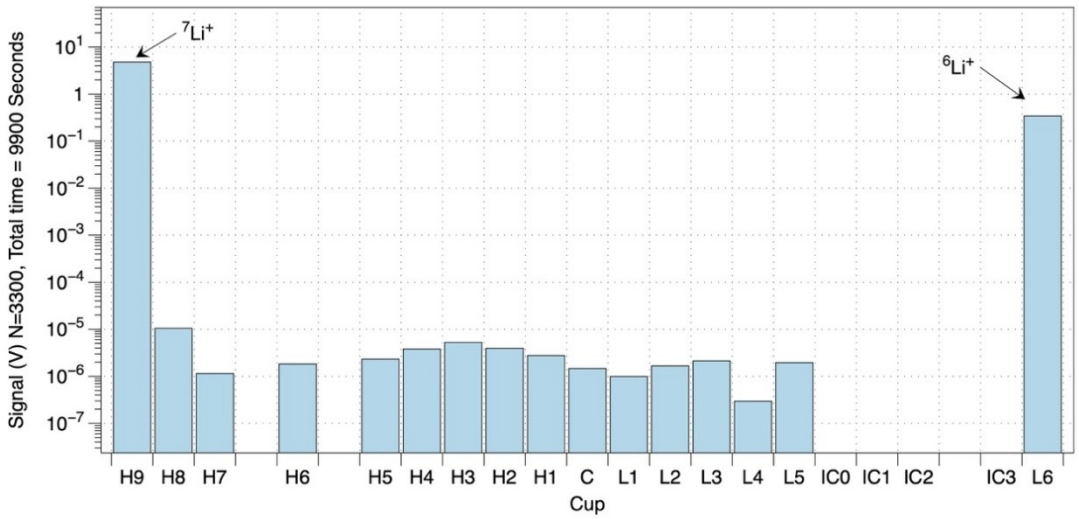

Fig. F Signal intensity of the collectors when measuring Li isotope, no tailing was observed, hence, it is sufficient to separate $^{40}Ar^{3+}$ from $^{13}C^{+}$.