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Stability and dissociation pathways of doped Au_nX^+ clusters (X = Y, Er, Nb)

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Supplementary Information

Metastable fragmentation pathways of Au_n^+, Au_nY^+, Au_nEr^+ (n = 3-20), and Au_nNb^+ (n = 3-14).

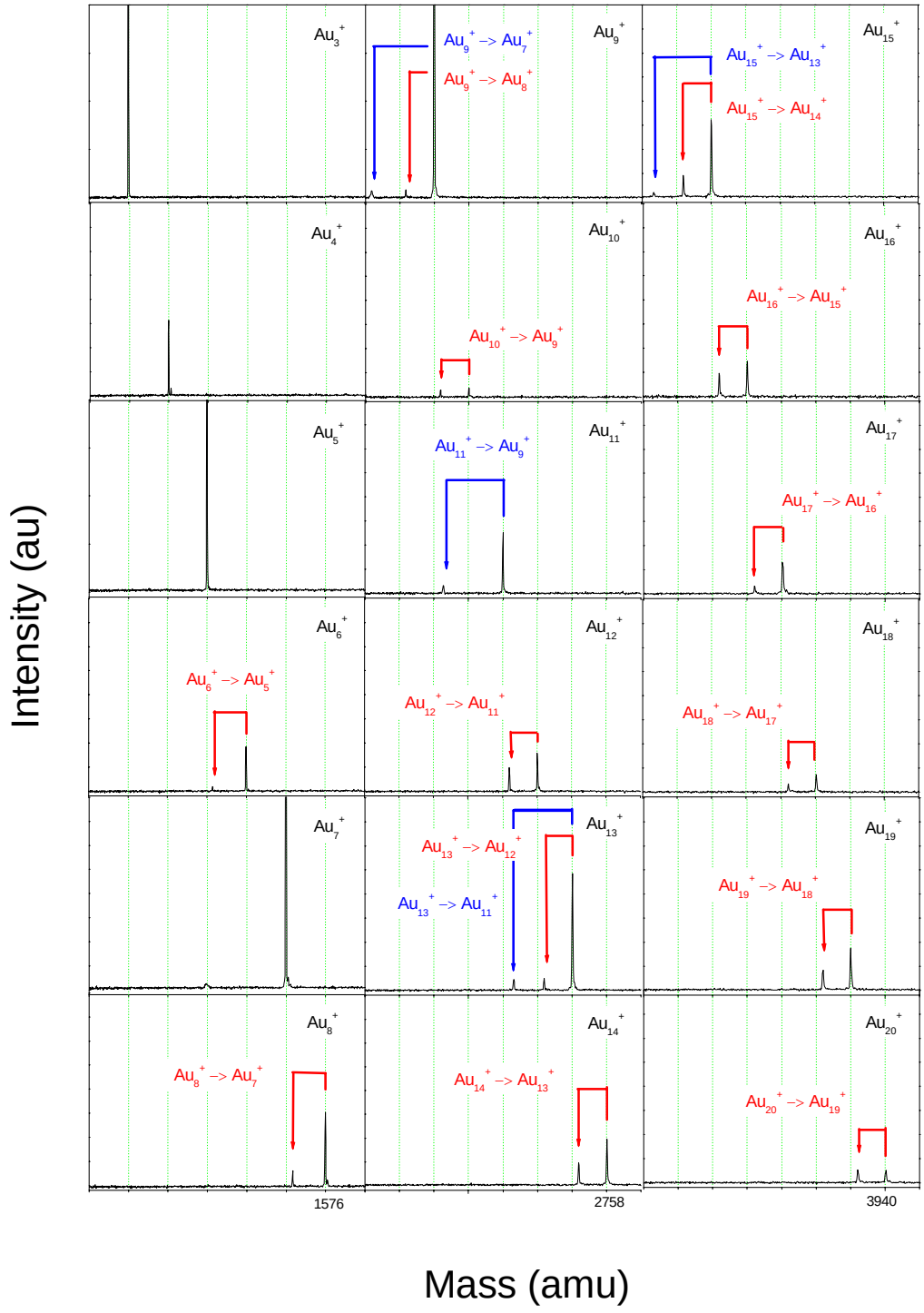

Fig. S1. Metastable fragmentation of Au_n^+ (n = 3-20) clusters. The dashed lines indicate the expected positions of the Au_n^+ mass peaks in case they would not have been deflected by the mass selector. The most intense peak corresponds to the selected cluster; the smaller peaks correspond to metastable fragments. The dissociation channels are given by labelled arrows.

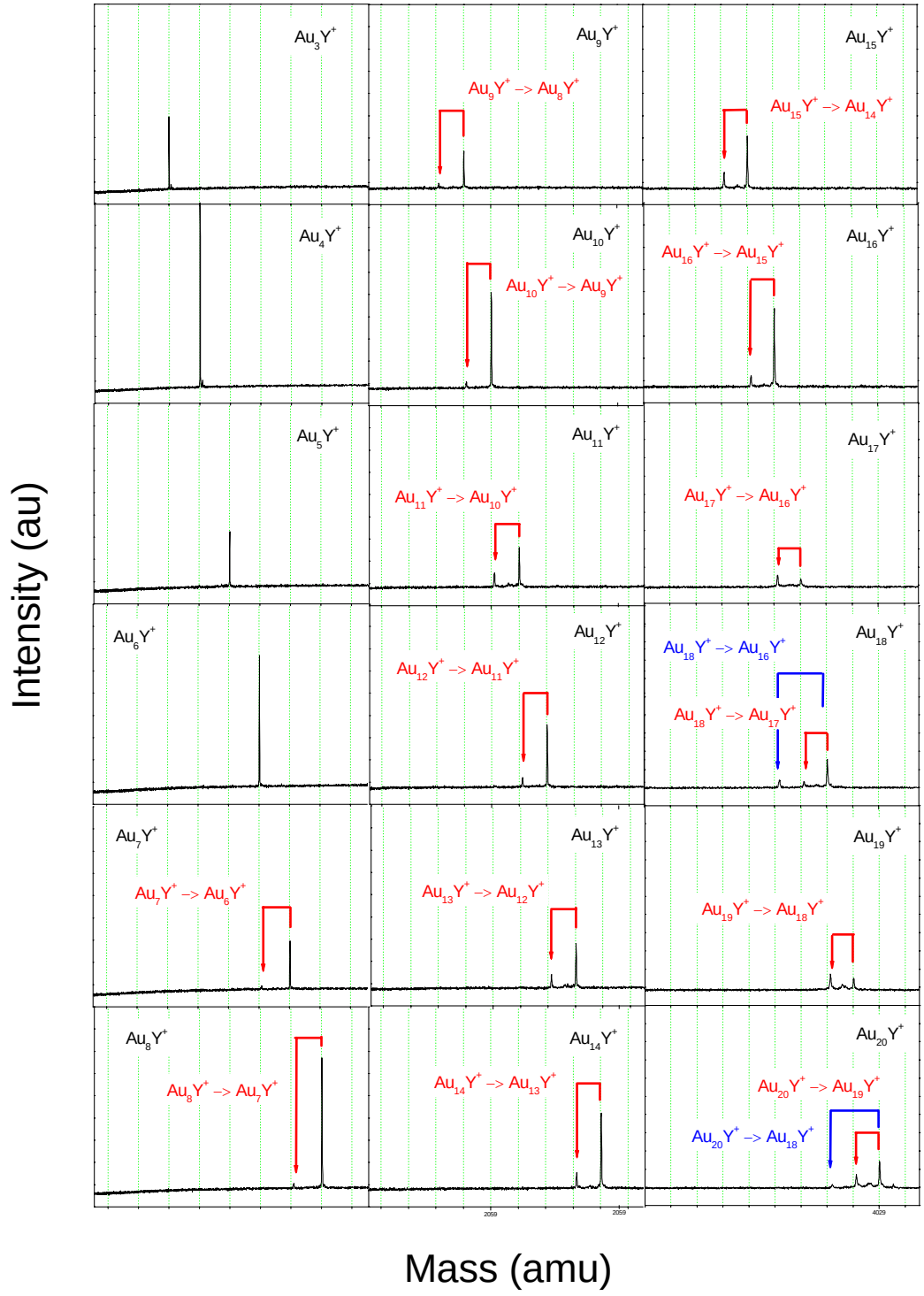

Fig. S2. Metastable fragmentation of Au_nY^+ (n = 3-20) clusters. The dotted vertical lines correspond to the expected positions of the Au_nY^+ species.

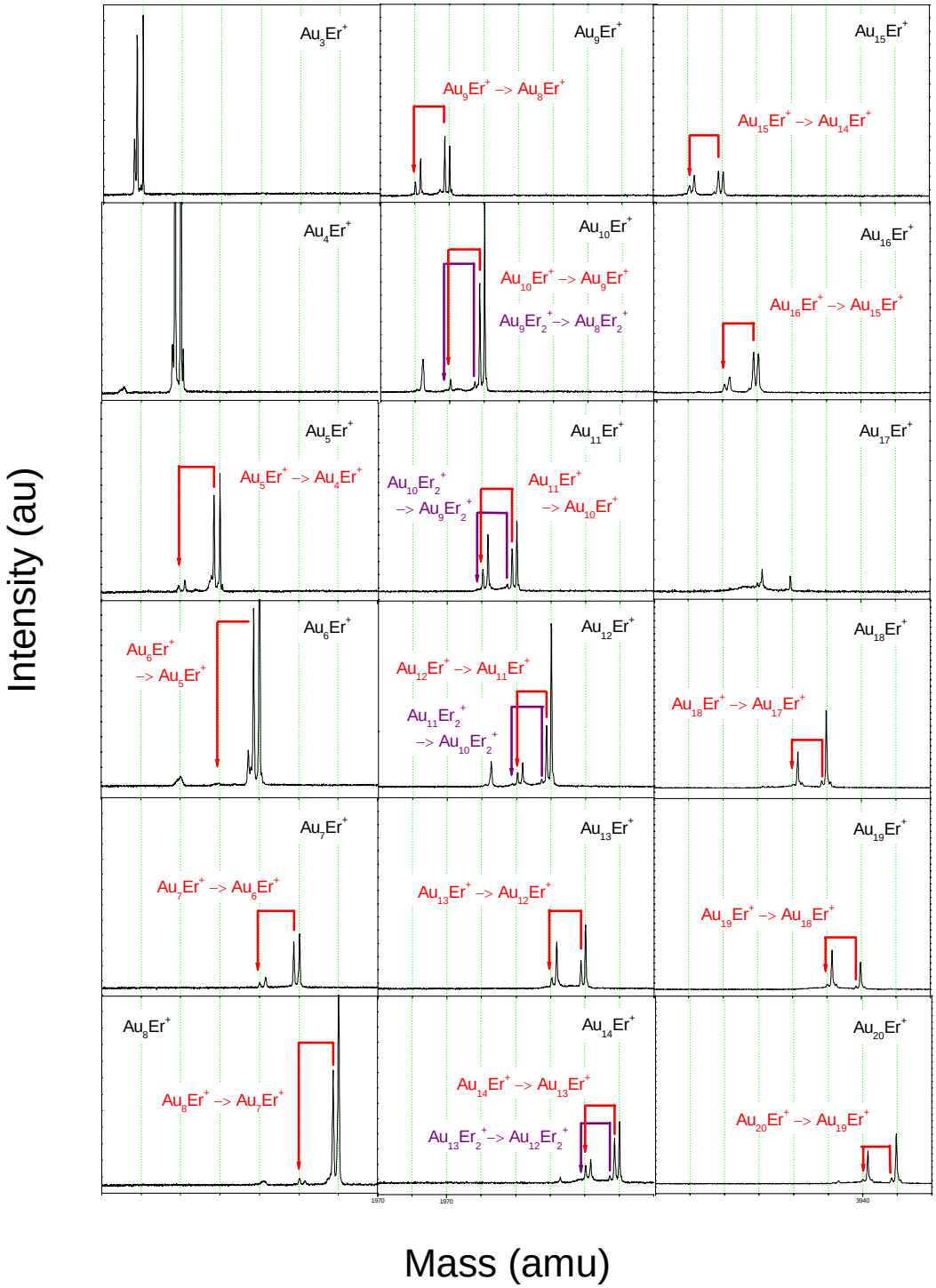

Fig. S3. Metastable fragmentation of mass selected groups of peaks: Au_{n+1}^+, Au_nEr^+, $Au_{n-1}Er_2^+$ with n = 3-20. The dotted grid lines correspond to pure Au_{n+1}^+ species. The nearest peak to the left of the pure cluster peak corresponds to Au_nEr^+, the second nearest, only visible for some sizes, corresponds to $Au_{n-1}Er_2^+$. The fragments of the erbium doped species are labelled, non labelled fragments are stemming from the pure gold clusters, shown in Fig. a.

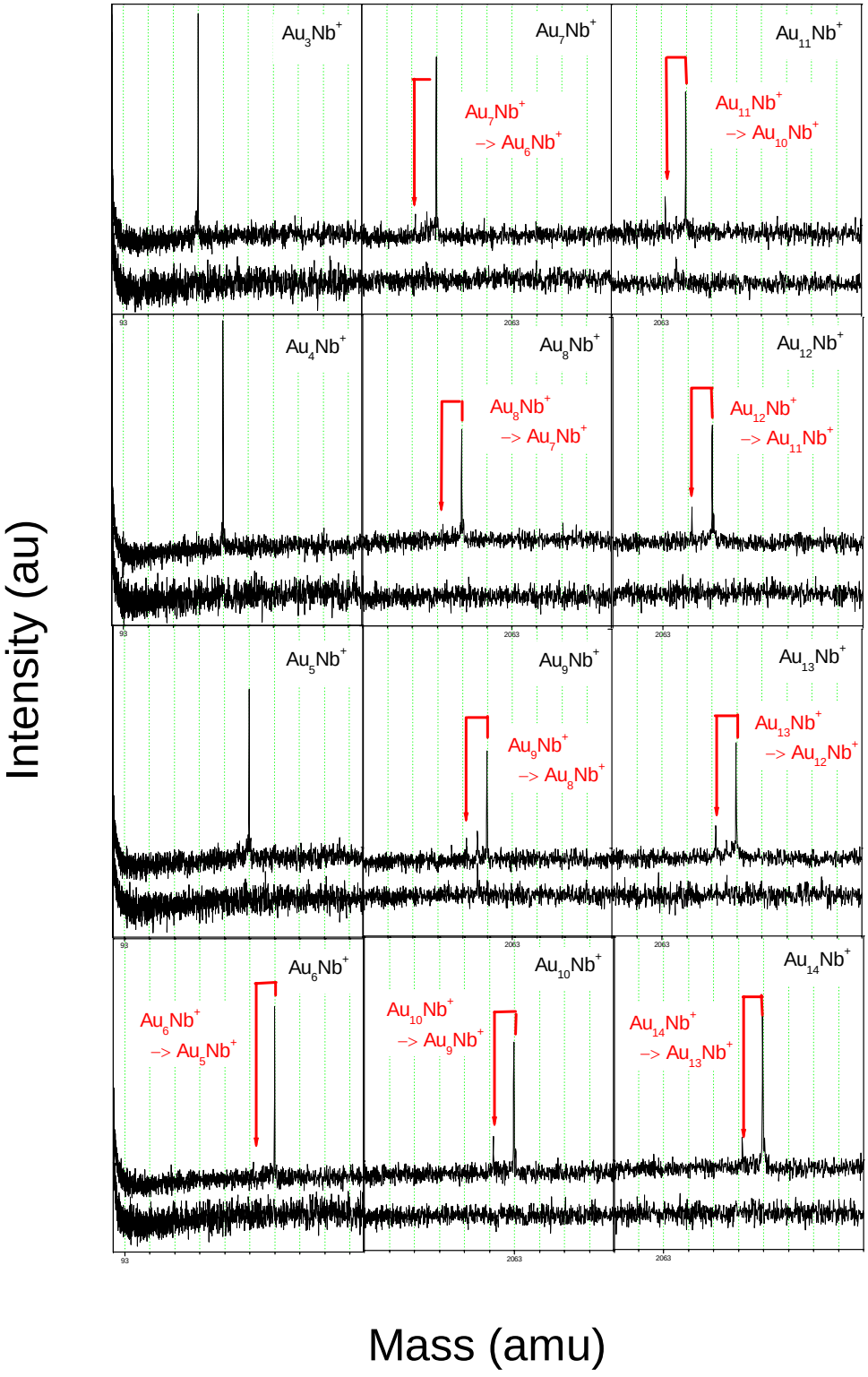

Fig. S4. Metastable fragmentation of Au_nNb^+ (n = 3-14) clusters. The bottom curves show the signal visible without any Nb in the clusters and were recorded as a reference. The dashed lines indicate the expected positions of the Au_nNb^+ clusters.