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Nanotubes stretched in Liquid-Metal-Ion-Sources:their influence on the cluster emission and on the isotopic anomalies. RENE JEAN TARENTO, PIERRE JOYES, JEAN VAN DE WALLE, LPS universite de Paris Sud — The present contribution argues that an intense electric field (few V/A) provides an alternative method to stretch matter and to form nanotubes locally. The very high electric field is supplied by a Liquid Metal Ion Source (LMIS). Intriguing aspects are displayed by the LMIS mass spectra of some pure elements. The periodicity of pure Ge or Sn LMIS i.e. series of equidistant peaks such Ge^{3+}_{6n+1} with n=3 to 8 or Ge^{3+}_{6n+4} with n=7 to 14 or the formation of unexplained Au^{3+}_{8} and Au^{3+}_{16} ions for the pure Au LMIS are attributed to the existence of Ge, Sn or Au nanotubes in operating LMIS. LMIS results on eutectic $Au_{0.73}Ge_{0.27}$ alloy show the formation of a gold nanotube associated with the strong Au^{3+}_{8} emission. The Ge^{+}_{2} emitted near the gold nanotube interact with a larger electric field than in the pure Ge LMIS provoking a bond break in heteroisotope dimers and therefore isotope anomalies in dimer emission. Finally we analyse the results from Au-Si eutectic

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