

Highly charged metal ions produced from volatile organometallic compounds in a room temperature electron beam ion trap

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A MIVOC system as it has been applied to several electron cyclotron resonance ion sources has been used to load a room temperature electron beam ion trap with a selection of different metals. X-ray measurements have demonstrated the ability of this method to produce highly charged ions for a large number of elements in a simple way and at low costs, which is favored by the low consumption rate of the used substances and operation of the ion trap at room temperature. The analysis of x-ray spectra measured with a Si(Li) semiconductor detector which is based on atomic structure calculations indicate the production of Mn^{23+} , Fe^{25+} , Ge^{30+} , and Sn^{44+} ions. © 2000 American Institute of Physics. [S0034-6748(00)04205-2]