

# **A HIGHLY EFFICIENT $H^-$ ION SOURCE FOR CYCLOTRONS**

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An internal high current  $H^-$  ion source for cyclotrons and other accelerators were developed, where some very effective methods of  $H^-$  ion production are used. The source is distinguished by high gas efficiency. A plasma-surface method for  $H^-$  ion production without using cesium vapour was applied.