

Abstract Submitted
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Atmospheric Pressure Micro Inductively Coupled Plasma Source with Floating Electrode MINORU SASAKI, HIROKI MATSUYAMA, SHINYA KUMAGAI, Toyota Technological Institute, MASARU HORI, Nagoya University, MICROMECHATRONICS LABORATORY TEAM, TOKAI REGION NANOTECHNOLOGY MANUFACTURING CLUSTER IN THE KNOWLEDGE CLUSTER INITIATIVE COLLABORATION — Atmospheric pressure micro-ICP source is realized. Cu coil electrode and trench are prepared by milling glass epoxy substrate. U-shaped coil electrode is 9mm wide and 50mm long. Plasma ignition is promoted with the floating electrode placed inside the channel for the gas flow. Micro-ICP is generated at ~ 35 W of 100 MHz with He gas flow. In the spectra, O and OH peaks are observed in addition to He or Ar peaks, but metal (W) or C peaks are not observed. The device shows durability against >5 h operation.

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