Contribution ID: **214** Type: **Oral**

HYBRID PLASMA-CATALYTIC REFORMING OF RICH ETHANOL-AIR MIXTURES

Contact Phone

Abstract

Influence of the ratio between the components of the ethanol-air mixture on the characteristics of the plasma components during the hybrid plasma-catalytic reforming of ethanol was investigated using optical emission spectroscopy. The rotational temperature of excited OH molecules was shown to become higher during the reforming than in the pure air plasma of rotating gliding discharge. Rotational temperature of OH was not impacted by the fuel equivalence ratio of ethanol-air mixture. The population of vibrational energy levels of OH molecules was shown to not correspond with the Boltzmann distribution.

Type of Book of Abstracts

Primary authors: Mr FEDIRCHYK, Igor (Taras Shevchenko National University of Kyiv); Dr NEDYBALIUK, Oleg (Taras Shevchenko National University of Kyiv); Prof. CHERNYAK, Valeriy (Taras Shevchenko National University of Kyiv)

Presenter: Mr FEDIRCHYK, Igor (Taras Shevchenko National University of Kyiv)

Session Classification: Plasma Physics

Track Classification: Plasma Physics