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Reforming of ethanol in plasma of discharge with gas flow of "tornado" type and "liquid" electrode VALERIY CHERNYAK, OLEG NEDYBALIUK, SERGIJ OLSZEWSKI, KYIV NATIONAL TARAS SHEVCHENKO UNIVERSITY, DEPT. OF PHYSICAL ELECTRONIC TEAM — This paper presents the results of experimental and theoretical investigations of the process of non-thermal plasma-assisted reforming of aqueous ethanol solutions in the dynamic plasma liquid system using the DC discharge in a reverse vortex gas flow of tornado type with a "liquid" electrode (TORNADO-LE). Mass-spectrometry of synthesis gas for the ethanol reforming in the TORNADO-LE was measured. Coefficient of energy transformation for the ethanol reforming in the TORNADO-LE was obtained. Also output gas composition was measured by gas-chromatography (H_2 - 28%, CO - 17,5%, N_2 - 55%, CO_2 - 4,5%).

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