Abstract Submitted
for the GEC10 Meeting of
The American Physical Society

Dynamic Plasma–Liquid Systems and its applications VALERIY CHERNYAK, Taras Shevchenko National Univ. of Kyiv, Faculty of Radio Physics, Dept. of Physical Electronics, Prospect Acad. Glushkova 2/5, Kyiv 03022, Ukraine, SERGEJ OLSZEWSKI, IRYNA PRYSIAZHNEVYCH, VITALIY YUKHYMENKO, DMITRY LEVKO, ANATOLIJ SHCHEDRIN, ANDRIY RYBATSEV, VADYM NAUMOV, KYIV NATIONAL TARAS SHEVCHENKO UNIVERSITY TEAM, INSTITUTE OF PHYSICS, NATIONAL ACADEMY OF SCIENCES OF UKRAINE COLLABORATION — Results of investigations of plasma-liquid systems based on transversal discharges at atmospheric pressure such as transverse arc, secondary discharge supported by plasma of transverse arc, DC and Pulse discharges in a gas channel with liquid wall working in quiet and microporous bubbling liquids, discharge in a reverse vortex gas flow of tornado type with a "liquid" electrode applied for different ecological applications including reforming of liquid hydrocarbons (biofuels) for obtaining hydrogen-enriched synthesis gases, destruction of toxic hydrocarbons in aqueous solutions and synthesis of cacbon nanoparticles (metalofullerenes, nanotubes etc) from ethanol are presented and discussed in this work.

Valeriy Chernyak
Taras Shevchenko National Univ. of Kyiv, Faculty of Radio Physics,
Dept. of Physical Electronics, Prospect Acad.
Glushkova 2/5, Kyiv 03022, Ukraine

Date submitted: 14 Jun 2010 Electronic form version 1.4