Abstract Submitted
for the GEC12 Meeting of
The American Physical Society

Industrial application of the decomposition of $CO_2 \cdot NO_x$ by large flow atmospheric microwave plasma LAMP employed in motorcar[1] ANIL PANDEY, SYUNTA NIWA, YOSHINARI MORII, SHUNJIRO IKEZAWA, Chubu University — In order to decompose $CO_2 \cdot NO_x$ [1], we have developed the large flow atmospheric microwave plasma; LAMP [2]. It is very important to apply it for industrial innovation, so we have studied to apply the LAMP into motorcar. The characteristics of the developed LAMP are that the price is cheap and the decomposition efficiencies of $CO_2 \cdot NO_x$ are high. The mechanism was shown as the vertical configuration between the exhaust gas pipe and the waveguide was suitable [2]. The system was set up in the car body with a battery and an inverter. The battery is common between the engine and the inverter. In the application of motorcar, the flow is large, so the LAMP which has the merits of large flow, high efficient decomposition, and cheap apparatus will be superior.

[1] H. Barankova, L. Bardos, ISSP 2011, Kyoto.
[2] S. Ikezawa, S. Parajulee, S. Sharma, A. Pandey, ISSP 2011, Kyoto (2011) pp. 28-31; S. Ikezawa, S. Niwa, Y. Morii, JJAP meeting 2012, March 16, Waseda U. (2012).

[1]The work was partly supported by the funds of Knowledge Cluster and Chubu University.

Shunjiro Ikezawa
Chubu University

Date submitted: 19 Jun 2012 Electronic form version 1.4