

PLASMACHEMICAL PROCESS IN THE NONSELF-DISCHARGE
STIMULATED BY THE RELATIVISTIC ELECTRON BEAM
IN THE HIGH PRESSURE N_2-O_2 MIXTURE.

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The possibility of carrying out the synthesis reactions in a gaseous discharge stimulated by relativistic electron beam is considered. The electron beam has following parameters: current density $j=500 \text{ A/cm}^2$, electron's energy $W=500 \text{ kev}$, time duration $\tau=40 \text{ nsec}$. The gaseous discharge takes place in the mixture of N_2 and O_2 when the full pressure is about several atmospheres and the electric field has the magnitude below the breakdown one. It is shown that in these conditions when $T_e \gg T_0$, the reactions flow much more effectively than in the case of a full thermal equilibrium.