Mechanism and Diagnoses on Plasma Generated by Hypervelocity Impact  
QINGMING ZHANG, ENLING TANG, FENGLEI HUANG, State Key Laboratory of Explosion Science and Technology, Beijing Institute of Technology, LAB.OF IMPACT DYNAMICS TEAM — Physical mechanism of plasma generated by hypervelocity impact is analyzed in the paper. The physical phenomenon and the critical condition of plasma for aluminum generated by hypervelocity impact are obtained with the help of the diagnostic system on the characteristic parameters of plasma. The features of plasma impact-generated are short lifespan, small scale in space and non-uniform distribution of particles and time-dependent disturbance, which make the experiment diagnoses very difficult. The sweep Langmuir probe diagnostic system of characteristic parameters of plasma and the magnetic probe diagnostic system for weak magnetic field are introduced. From them some typical results has gotten, correspondingly, the question and the developing trend are in discussion.

1The work is supported by grant 10772028 from National Natural Science Foundation of China.

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