

Abstract Submitted
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Movement of Plasma Components Thrown from a Small Slit into a Cylindrical Container MASAOKI KATO, YOHEI KOBAYASHI, MASANARI MATSUMOTO, TAKAHIRO SHIMIZU, TAKEO OHTE, Gunma National College of Technology — We made some containers as models of the narrow space with small slit, and studied the movement of plasma estimating the reached components inside the containers. Comparing differences of contact angle before plasma treatment with after that, the quantity of the plasma reached to that place is estimated. The treatment power and time change the quantity of the plasma into these containers. In cylindrical containers, the differences of contact angle were almost symmetrical from the point of the slit. The plasma components in the container behave toward every radius by same motion. Near the slit there is the biggest change of the contact angle in all points inside the container, and far from the slit, the changes become smaller. We get that the modification degree inside the containers is described by the distance from the slit. Changing the slit length, when the length is long, the quantity of plasma is small. The spread of the plasma is almost similar in each length. The slit length does not change the behavior of plasma thrown into the container, but change the quantity. The longer the slit length is, the later the time introducing plasma components will be. The surface modification sources are ions and radicals mainly. Both ions and radicals operate the modification and relate to the behavior inside these containers.

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