

# 탄성정하중에 의한 구조변화 및 원자충진률 의존성

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## Elastostatically induced structural change and its packing density dependence

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### Abstract

This study demonstrated that elastic stress imposed on amorphous alloys for a prolonged period of time at room temperature causes the permanent deformation characterized by the homogeneous flow. The rate of the homogeneous flow largely depends on the atomic packing density such that the strain rate increased with increasing packing density. This homogeneous flow was accompanied by the formation of excess free volume that is formed as a result of the shear-induced structural disordering. Physics underlying these findings were interpreted from the molecular dynamics viewpoint.

**Key Words** : amorphous alloy, homogeneous deformation, atomic packing density, free volume formation

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