

**De g a d P d c f F a e W d C e S c e**

**Ab ac :**

Fa g e ec a ca e e a d da age a a f 3D b a ded  
c e defec

Ab ac :

Ke d

V P L J R`6a Q U

Effect of Surface Temperature on the Interfacial Properties of Glass

Abstract :

=

Keywords

Beneficial Effects of Surface Temperature on the Interfacial Properties of Glass

**P e a a       f F   c   a Na f be Me b a e a d I A**  
**ca               e F e d f E               e a**

**Ab   ac :**





A H g -Va e, L -C Rec c g f Wa e F be Re f ced P a c

Ab ac :

,

Ke d

B ef CV f Re e

3D P g f H g - e f a ce C Ca b F be  
Re f ced T e a c

Ab ac :

Ke d

B ef CV f Re e



E a a f Ve H g C c e Fa g e P e f CFRP La a e  
b U g U a c Fa g e Te g Tec e

Ab ac :

Ke d

B ef CV f Re e

**A      -f   c      a g a   e e/Ca      g ga   ea   a**

3D W e C e : A P g P a f f Ad a ced  
M f c a S c e

Ab ac :

Ke d

## 蚕丝的功能化与丝素蛋白基新材料

Bac e a Ce e/C a C e Ba ed Ae ge f  
P e e e Se a d M f c a Ad be

Ab ac :

/0

МОНА Б СТУН

De g f T ee D e a H -S c ed Fab c C e  
a d T e C e P e

Ab ac :

Ke d

B ef CV f Re e

Λ

P e a a f P  
e

e e Na Ebe S e Me a - ga c F a  
F a d e e e



Ab ac :  
H

R

H V L

Г Ъ

Effect of the effective capacity of the data set

Abstract :

Keywords

Benefit of the Reference



## Deformation Mechanism of Nano Layered Solid

Xiao-Wen LEI<sup>1\*</sup>

*1. Department of Mechanical Engineering, Faculty of Engineering,  
University of Fukui, Fukui, Japan*

**Abstract:** Graphite consists of carbon atoms arranged in layers of hexagonal lattice. In this research, we aim to obtain the fundamental knowledge about controlling the out-of-plane deformation of graphite with lattice defects. We discuss the simulation result of graphite with arranged lattice defects under compression force using molecular dynamics method. The results of simulation show that out-of-plane deformation like delamination and kink deformation occur. The positions of out-of-plane deformation correspond to the location of dislocations. The out-of-plane deformation is not only affected by the positions of dislocations but misorientation angle due to dislocation array. Compressive stress-compressive strain curve of the simulation shows that maximum compressive stress becomes relatively higher as increasing the number of dislocations. We investigate the mean curvature of each layer of graphite to discuss the amplitude of out-of-plane deformation. We use dip isogon method which is often used to study the folding mechanism of strata in geology to classify the deformation of adjacent layers. From the obtained results, there is possibility of controlling compressive deformation of graphite by arranging dislocations.

**Keyword** graphite; lattice defect; kink deformation; mean curvature.

### Brief CV of Reporter

2010. 4	2012. 3	Interdisciplinary Graduate School of Science and Technology, Shinshu University, Japan, (Grade skipping) Ph.D.
2011.10	2011.12	Columbia Nanomechanics Research Center (CNRC), Department of Earth and Environmental Engineering, Columbia University in the City of New York, USA, Visiting Research Fellow.
2012. 4	2013. 2	Interdisciplinary Graduate School of Science and Technology, Shinshu University, Japan, Postdoctoral Research Fellow.
2013. 3	2016. 2	Department of Adaptive Machine Systems Graduate School of Engineering, Osaka University, Japan, Specially Appointed Assistant Professor.
2016. 3	2018. 9	Department of Mechanical Engineering Faculty of Engineering, University of Fukui, Japan, Senior Assistant Professor.
2018.10	present	Department of Mechanical Engineering Faculty of Engineering, University of Fukui, Japan, Associate Professor.