Accepted Manuscript

Title: Atomic-scale characterization of plasma-induced damage in plasma-enhanced atomic layer deposition

Authors: Kangsik Kim, Il-Kwon Oh, Hyungjun Kim,

Zonghoon Lee

PII: S0169-4332(17)31896-2

DOI: http://dx.doi.org/doi:10.1016/j.apsusc.2017.06.241

Reference: APSUSC 36441

To appear in: APSUSC

Received date: 13-4-2017 Revised date: 22-6-2017 Accepted date: 23-6-2017

article Please cite this Kangsik Kim, Il-Kwon Oh, Hyungjun as: plasma-induced Kim, Zonghoon Lee, Atomic-scale characterization plasma-enhanced atomic layer deposition, **Applied** Surface Sciencehttp://dx.doi.org/10.1016/j.apsusc.2017.06.241

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Atomic-scale characterization of plasma-induced damage in plasma-enhanced atomic layer deposition

Kangsik Kim^a, Il-Kwon Oh^b, Hyungjun Kim^b and Zonghoon Lee^{a*}

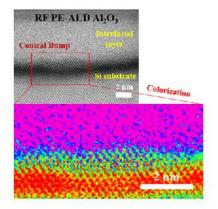
^aSchool of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan 44919, Republic of Korea

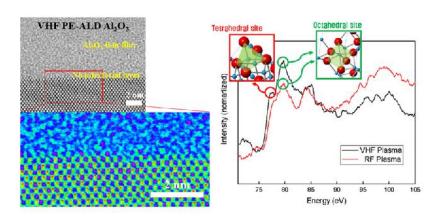
^bSchool of Electrical and Electronic Engineering, Yonsei University, Seoul 03722, Republic of Korea

* Corresponding Author

E-mail address: zhlee@unist.ac.kr (Z. Lee)

Graphical abstract





Highlights

- · Deposition process of VHF PE-ALD shows a reduction of the plasma-induced damage.
- · VHF plasma technology can control atomic configuration on the surface.
- Increasing number of reactive ions and radicals has an influence on film formation.
- Dielectric constant of amorphous Al₂O₃ is related to lattice dielectric constant.

Download English Version:

https://daneshyari.com/en/article/5347404

Download Persian Version:

https://daneshyari.com/article/5347404

<u>Daneshyari.com</u>