

## LETTERS

### Noninvasive measurement and control of the temperature of Pt nanofilms on Si supports

I. I. Nedrygailov, E. Hasselbrink, D. Diesing, S. K. Dasari, M. A. Hashemian and E. G. Karpov

J. Vac. Sci. Technol. A **30**, 030601 (2012); <http://dx.doi.org/10.1116/1.3696973>

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### Influence of magnetic ordering on the elastic properties of PdFe<sub>3</sub>N

Tetsuya Takahashi, Denis Music and Jochen M. Schneider

J. Vac. Sci. Technol. A **30**, 030602 (2012); <http://dx.doi.org/10.1116/1.4703897>

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## REVIEW ARTICLE

### High power impulse magnetron sputtering discharge

J. T. Gudmundsson, N. Brenning, D. Lundin and U. Helmersson

J. Vac. Sci. Technol. A **30**, 030801 (2012); <http://dx.doi.org/10.1116/1.3691832>

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### Colloidal nanocrystal quantum dot assemblies as artificial solids

Tobias Hanrath

J. Vac. Sci. Technol. A **30**, 030802 (2012); <http://dx.doi.org/10.1116/1.4705402>

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## INTERFACES

### Improved characteristics of mesa-type intrinsic Josephson junctions by vacuum cleavage process for Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>8+δ</sub>/Au contacts

Hiroki Ishida, Takahiro Kato, Atsushi Saito and Kanji Yasui

J. Vac. Sci. Technol. A **30**, 031101 (2012); <http://dx.doi.org/10.1116/1.4707151>

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## PLASMA SCIENCE AND TECHNOLOGY

### Effect of Cl<sub>2</sub>- and HBr-based inductively coupled plasma etching on InP surface composition analyzed using *in situ* x-ray photoelectron spectroscopy

S. Bouchoule, L. Vallier, G. Patriarche, T. Chevolleau and C. Cardinaud

J. Vac. Sci. Technol. A **30**, 031301 (2012); <http://dx.doi.org/10.1116/1.3692751>

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### Negative plasma potential in a multidipole chamber with a dielectric coated plasma

**boundary****J. P. Sheehan and Noah Hershkowitz**J. Vac. Sci. Technol. A **30**, 031302 (2012); <http://dx.doi.org/10.1116/1.4705514>[+ VIEW DESCRIPTION](#)**Characterization of hydrogen–plasma interactions with photoresist, silicon, and silicon nitride surfaces****Bayu A. Thedjoisworo, David Cheung and Davoud Zamani**J. Vac. Sci. Technol. A **30**, 031303 (2012); <http://dx.doi.org/10.1116/1.4705512>[+ VIEW DESCRIPTION](#)**Ion energy distributions, electron temperatures, and electron densities in Ar, Kr, and Xe pulsed discharges****Hyungjoo Shin, Weiye Zhu, Demetre J. Economou and Vincent M. Donnelly**J. Vac. Sci. Technol. A **30**, 031304 (2012); <http://dx.doi.org/10.1116/1.4705515>[+ VIEW DESCRIPTION](#)

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**SURFACES****Binding of styrene on silicon (111)-7 × 7 surfaces as a model molecular electronics system****Conan R. Weiland, Liu Yang, Douglas J. Doren, Carl A. Menning, Dimitri Skliar, Brian G.****Willis, Jingguang G. Chen and Robert L. Opila**J. Vac. Sci. Technol. A **30**, 031401 (2012); <http://dx.doi.org/10.1116/1.3701712>[+ VIEW DESCRIPTION](#)**Solvent-assisted growth of metal phthalocyanine thin films on Au(111)****Levan Tskipuri, Qian Shao and Janice Reutt-Robey**J. Vac. Sci. Technol. A **30**, 031402 (2012); <http://dx.doi.org/10.1116/1.4705511>[+ VIEW DESCRIPTION](#)

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**THIN FILMS****Improvement of electrical and optical properties of molybdenum oxide thin films by ultralow pressure sputtering method****Myeong Sook Oh, Bong Seob Yang, Jong Ho Lee, Seong Ha Oh, Ung Soo Lee, Yoon Jang****Kim, Hyeong Joon Kim and Myung Soo Huh**J. Vac. Sci. Technol. A **30**, 031501 (2012); <http://dx.doi.org/10.1116/1.3692753>[+ VIEW DESCRIPTION](#)**Influence of process parameters on rolling-contact-fatigue life of ion plated nickel–copper–silver lubrication****Mike Danyluk and Anoop Dhingra**J. Vac. Sci. Technol. A **30**, 031502 (2012); <http://dx.doi.org/10.1116/1.3693603>[+ VIEW DESCRIPTION](#)

**Visible light-induced photocatalytic properties of WO<sub>3</sub> films deposited by dc reactive magnetron sputtering**

Masahiro Imai, Maiko Kikuchi, Nobuto Oka and Yuzo Shigesato

J. Vac. Sci. Technol. A **30**, 031503 (2012); <http://dx.doi.org/10.1116/1.3696876>[+ VIEW DESCRIPTION](#)**Influence of chemical composition and deposition conditions on microstructure evolution during annealing of arc evaporated ZrAlN thin films**

L. Rogström, M. P. Johansson, N. Ghafoor, L. Hultman and M. Odén

J. Vac. Sci. Technol. A **30**, 031504 (2012); <http://dx.doi.org/10.1116/1.3698592>[+ VIEW DESCRIPTION](#)**Equivalent-circuit model for vacuum ultraviolet irradiation of dielectric films**

Harsh Sinha and J. Leon Shohet

J. Vac. Sci. Technol. A **30**, 031505 (2012); <http://dx.doi.org/10.1116/1.3693602>[+ VIEW DESCRIPTION](#)**Influence of process parameters on properties of reactively sputtered tungsten nitride thin films**

Maria L. Addonizio, Anna Castaldo, Alessandro Antoniaia, Emilia Gambale and Laura Lemmo

J. Vac. Sci. Technol. A **30**, 031506 (2012); <http://dx.doi.org/10.1116/1.3698399>[+ VIEW DESCRIPTION](#)**Influence of ionization degree on film properties when using high power impulse magnetron sputtering**

Mattias Samuelsson, Daniel Lundin, Kostas Sarakinos, Fredrik Björefors, Bengt Wälivaara, Henrik Ljungcrantz and U. Helmersson

J. Vac. Sci. Technol. A **30**, 031507 (2012); <http://dx.doi.org/10.1116/1.3700227>[+ VIEW DESCRIPTION](#)**Incompatibility of standard III–V compound semiconductor processing techniques with terbium-doped InGaAs of high terbium concentration**

Ashok T. Ramu, Laura E. Clinger, Pernell B. Dongmo, Jeffrey T. Imamura, Joshua M. O. Zide and John E. Bowers

J. Vac. Sci. Technol. A **30**, 031508 (2012); <http://dx.doi.org/10.1116/1.3701951>[+ VIEW DESCRIPTION](#)**Thin layer composition profiling with angular resolved x-ray photoemission spectroscopy: Factors affecting quantitative results**

T. Conard, W. Vandervorst, A. Bergmaier and K. Kimura

J. Vac. Sci. Technol. A **30**, 031509 (2012); <http://dx.doi.org/10.1116/1.4704603>[+ VIEW DESCRIPTION](#)

## THIN FILMS

### Effect of target–substrate distance on properties of flexible InZnSnO films grown by linear facing target sputtering

Hyun-Su Shin, Ju-Hyun Lee and Han-Ki Kim

J. Vac. Sci. Technol. A **30**, 031510 (2012); <http://dx.doi.org/10.1116/1.4705520>

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### Effect of reactor pressure on the electrical and structural properties of InN epilayers grown by high-pressure chemical vapor deposition

M. K. Indika Senevirathna, Sampath Gamage, Ramazan Atalay, Ananta R. Acharya, A. G. Unil Perera, Nikolaus Dietz, Max Buegler, Axel Hoffmann, Liqin Su, Andrew Melton and Ian Ferguson

J. Vac. Sci. Technol. A **30**, 031511 (2012); <http://dx.doi.org/10.1116/1.4705727>

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### Atomic force microscopy and x-ray diffraction studies on agglomeration phenomena of ultrathin Au/Fe bilayers

Masao Kamiko, Jung-Woo Koo, Jae-Min Kim and Jae-Geun Ha

J. Vac. Sci. Technol. A **30**, 031512 (2012); <http://dx.doi.org/10.1116/1.4705518>

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## VACUUM SCIENCE AND TECHNOLOGY

### Study on surface modification of silicon using CHF<sub>3</sub>/O<sub>2</sub> plasma for nano-imprint lithography<sup>a)</sup>

Youngkeun Kim, Sungchil Kang, Yong-Hyun Ham, Kwang-Ho Kwon, Dmitriy Alexandrovich Shutov, Hyun-Woo Lee, Jae Jong Lee, Lee-Mi Do and Kyu-Ha Baek

J. Vac. Sci. Technol. A **30**, 031601 (2012); <http://dx.doi.org/10.1116/1.3695995>

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### Design and construction of the SuperKEKB vacuum system

Yusuke Suetsugu, Ken-ichi Kanazawa, Kyo Shibata, Takuya Ishibashi, Hiromi Hisamatsu, Mitsuru Shirai and Shinji Terui

J. Vac. Sci. Technol. A **30**, 031602 (2012); <http://dx.doi.org/10.1116/1.3696683>

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### Quantification of the atomic hydrogen flux as a function of filament temperature and H<sub>2</sub>flow rate

D. Ugur, A. J. Storm, R. Verberk, J. C. Brouwer and W. G. Sloof

J. Vac. Sci. Technol. A **30**, 031603 (2012); <http://dx.doi.org/10.1116/1.3700231>

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