REVIEW ARTICLES

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Atomic layer deposition on polymer fibers and fabrics for multifunctional and electronic textiles

Alexandra H. Brozena, Christopher J. Oldham and Gregory N. Parsons
J. Vac. Sci. Technol. A **34**, 010801 (2016);
http://dx.doi.org/10.1116/1.4938104

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TOP

ATOMIC LAYER DEPOSITION (ALD)

S

Thermal chemistry of copper acetamidinate atomic layer deposition precursors on silicon oxide surfaces studied by XPS

Yunxi Yao and Francisco Zaera
J. Vac. Sci. Technol. A **34**, 01A101 (2016);
http://dx.doi.org/10.1116/1.4927843

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Comparison of B_2O_3 and BN deposited by atomic layer deposition for forming ultrashallow dopant regions by solid state diffusion

Steven Consiglio, Robert D. Clark, David O'Meara, Cory S. Wajda, Kandabara Tapily and Gert J. Leusink
J. Vac. Sci. Technol. A **34**, 01A102 (2016);
http://dx.doi.org/10.1116/1.4928705

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Atomic layer deposition of molybdenum oxide from $(N^tBu)_2(NMe_2)_2Mo$ and O_2 plasma

Martijn F. J. Vos, Bart Macco, Nick F. W. Thissen, Ageeth A. Bol and W. M. M. (Erwin) Kessels
J. Vac. Sci. Technol. A **34**, 01A103 (2016);
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Dynamic order reduction of thin-film deposition kinetics models: A reaction factorization approach

Raymond A. Adomaitis
J. Vac. Sci. Technol. A **34**, 01A104 (2016);
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Diffusion and interface evolution during the atomic layer deposition of TiO_2 on GaAs(100) and InAs(100) surfaces

Liwang Ye and Theodosia Gougousi
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Vanadium dioxide film protected with an atomic-layer-deposited Al_2O_3 thin film

Xiao Wang, Yunzhen Cao, Chao Yang, Lu Yan and Ying Li
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Effect of substrate composition on atomic layer deposition using self-assembled monolayers as blocking layers

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Mechanistic modeling study on process optimization and precursor utilization with atmospheric spatial atomic layer deposition

Zhang Deng, Wenjie He, Chenlong Duan, Rong Chen and Bin Shan
J. Vac. Sci. Technol. A **34**, 01A108 (2016);
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Low-temperature atomic layer deposition of copper(II) oxide thin films

Tomi Iivonen, Jani Hämäläinen, Benoît Marchand, Kenichiro Mizohata, Miika Mattinen, Georgi Popov, Jiyeon Kim, Roland A. Fischer and Markku Leskelä
J. Vac. Sci. Technol. A **34**, 01A109 (2016);
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Effect of hydrogen peroxide pretreatment on ZnO-based metal–semiconductor–metal ultraviolet photodetectors deposited using plasma-enhanced atomic layer deposition

Yu-Chang Lin, Hsin-Ying Lee and Tsung-Hsin Lee
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Atomic layer deposition of ultrathin Cu_2O and subsequent reduction to Cu studied by *in situ* x-ray photoelectron spectroscopy

Dileep Dhakal, Khaybar Assim, Heinrich Lang, Philipp Bruener, Thomas Grehl,Colin Georgi, Thomas Waechtler, Ramona Ecke, Stefan E. Schulz and Thomas Gessner
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Morphology, composition and electrical properties of SnO_2:Cl thin films grown by atomic layer deposition

Hsyi-En Cheng, Chia-Hui Wen and Ching-Ming Hsu
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Blistering during the atomic layer deposition of iridium

Pascal Genevée, Ernest Ahiavi, Norik Janunts, Thomas Pertsch, Maria Oliva,Ernst-Bernhard Kley and Adriana Szeghalmi
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Gas permeation barriers deposited by atmospheric pressure plasma enhanced atomic layer deposition

Lukas Hoffmann, Detlef Theirich, Tim Hasselmann, André Räupke, Daniel Schlamm and Thomas Riedl
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Atomic layer deposited cobalt oxide: An efficient catalyst for $NaBH_4$hydrolysis

Dip K. Nandi, Joydev Manna, Arpan Dhara, Pratibha Sharma and Shaibal K. Sarkar
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Novel copper compounds for vapor deposition: Characterization and thermolysis

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Spectroscopic investigation of the electronic structure of thin atomic layer deposition HfO_2 films

Silma Alberton Corrêa, Simone Brizzi and Dieter Schmeisser
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Room temperature plasma enhanced atomic layer deposition for TiO_2 and WO_3 films

Alexander Strobel, Hans-Dieter Schnabel, Ullrich Reinhold, Sebastian Rauer andAndreas Neidhardt
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Atomic layer deposition of environmentally benign $SnTiO_x$ as a potential ferroelectric material

Siliang Chang, Sathees Kannan Selvaraj, Yoon-Young Choi, Seungbum Hong,Serge M. Nakhmanson and Christos G. Takoudis
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Ultraviolet optical properties of aluminum fluoride thin films deposited by atomic layer deposition

John Hennessy, April D. Jewell, Kunjithapatham Balasubramanian and Shouleh Nikzad
J. Vac. Sci. Technol. A **34**, 01A120 (2016);
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Fast spatial atomic layer deposition of Al_2O_3 at low temperature (<100 °C) as a gas permeation barrier for flexible organic light-emitting diode displays

Hagyoung Choi, Seokyoon Shin, Hyeongtag Jeon, Yeongtae Choi, Junghun Kim,Sanghun Kim, Seog Chul Chung and Kiyoung Oh
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Experimental demonstration of single electron transistors featuring SiO_2plasma-enhanced atomic layer deposition in Ni-SiO_2-Ni tunnel junctions

Golnaz Karbasian, Michael S. McConnell, Alexei O. Orlov, Sergei Rouvimov andGregory L. Snider
J. Vac. Sci. Technol. A **34**, 01A122 (2016);
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Low-temperature sequential pulsed chemical vapor deposition of ternary $B_xGa_{1-x}N$ and $B_xIn_{1-x}N$ thin film alloys

Ali Haider, Seda Kizir, Cagla Ozgit-Akgun, Ali Kemal Okyay and Necmi Biyikli
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Microscratch testing method for systematic evaluation of the adhesion of atomic layer deposited thin films on silicon

Lauri Kilpi, Oili M. E. Ylivaara, Antti Vaajoki, Jari Malm, Sakari Sintonen, Marko Tuominen, Riikka L. Puurunen and Helena Ronkainen
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Substrate temperature influence on the properties of GaN thin films grown by hollow-cathode plasma-assisted atomic layer deposition

Mustafa Alevli, Neşe Gungor, Ali Haider, Seda Kizir, Shahid A. Leghari andNecmi Biyikli
J. Vac. Sci. Technol. A **34**, 01A125 (2016);
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Ag films grown by remote plasma enhanced atomic layer deposition on different substrates

Akinwumi A. Amusan, Bodo Kalkofen, Hassan Gargouri, Klaus Wandel, Cay Pinnow, Marco Lisker and Edmund P. Burte
J. Vac. Sci. Technol. A **34**, 01A126 (2016);
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Plasma-enhanced atomic layer deposition of titanium oxynitrides films: A comparative spectroscopic and electrical study

Małgorzata Sowińska, Karsten Henkel, Dieter Schmeißer, Irina Kärkkänen,Jessica Schneidewind, Franziska Naumann, Bernd Gruska and Hassan Gargouri
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Atomic layer deposition of alternative glass microchannel plates

Aileen O'Mahony, Christopher A. Craven, Michael J. Minot, Mark A. Popecki,Joseph M. Renaud, Daniel C. Bennis, Justin L. Bond, Michael E. Stochaj, Michael R. Foley, Bernhard W. Adams, Anil U. Mane, Jeffrey W. Elam, Camden Ertley andOswald H. W. Siegmund
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Comparison of tungsten films grown by CVD and hot-wire assisted atomic layer deposition in a cold-wall reactor

Mengdi Yang, Antonius A. I. Aarnink, Alexey Y. Kovalgin, Dirk. J. Gravesteijn, Rob A. M. Wolters and Jurriaan Schmitz
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Luminescence properties of lanthanide and ytterbium lanthanide titanate thin films grown by atomic layer deposition

Per-Anders Hansen, Helmer Fjellvåg, Terje G. Finstad and Ola Nilsen
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Novel chemoresistive CH_4 sensor with 10 ppm sensitivity based on multiwalled carbon nanotubes functionalized with SnO_2 nanocrystals

Md Tanim Humayun, Ralu Divan, Yuzi Liu, Lara Gundel, Paul A. Solomon andIgor Paprotny
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Atomic layer deposition of boron-containing films using B_2F_4

Anil U. Mane, Jeffrey W. Elam, Alexander Goldberg, Thomas E. Seidel, Mathew D. Halls, Michael I. Current, Joseph Despres, Oleg Byl, Ying Tang and Joseph Sweeney
J. Vac. Sci. Technol. A **34**, 01A132 (2016);
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Electrical characterization of atomic layer deposited Al_2O_3/InN interfaces

Ye Jia, Amir M. Dabiran and Uttam Singisetti
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Rapid visible color change and physical swelling during water exposure in triethanolamine-metalcone films formed by molecular layer deposition

Paul C. Lemaire, Christopher J. Oldham and Gregory N. Parsons
J. Vac. Sci. Technol. A **34**, 01A134 (2016);
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Enhancing of catalytic properties of vanadia via surface doping with phosphorus using atomic layer deposition

Verena E. Strempel, Daniel Löffler, Jutta Kröhnert, Katarzyna Skorupska,Benjamin Johnson, Raoul Naumann d'Alnoncourt, Matthias Driess and Frank Rosowski
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Low-temperature SiON films deposited by plasma-enhanced atomic layer deposition method using activated silicon precursor

Sungin Suh, Seung Wook Ryu, Seongjae Cho, Jun-Rae Kim, Seongkyung Kim,Cheol Seong Hwang and Hyeong Joon Kim
J. Vac. Sci. Technol. A **34**, 01A136 (2016);
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Comparison of trimethylgallium and triethylgallium as “Ga” source materials for the growth of ultrathin GaN films on Si (100) substrates via hollow-cathode plasma-assisted atomic layer deposition

Mustafa Alevli, Ali Haider, Seda Kizir, Shahid A. Leghari and Necmi Biyikli
J. Vac. Sci. Technol. A **34**, 01A137 (2016);
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Atomic layer deposition by reaction of molecular oxygen with tetrakisdimethylamido-metal precursors

J Provine, Peter Schindler, Jan Torgersen, Hyo Jin Kim, Hans-Peter Karnthaler and Fritz B. Prinz
J. Vac. Sci. Technol. A **34**, 01A138 (2016);
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Atomic layer deposition of Al_2O_3 for single electron transistors utilizing Pt oxidation and reduction

Michael S. McConnell, Louisa C. Schneider, Golnaz Karbasian, Sergei Rouvimov, Alexei O. Orlov and Gregory L. Snider
J. Vac. Sci. Technol. A **34**, 01A139 (2016);
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Plasma enhanced atomic layer deposition of silicon nitride using neopentasilane

Stephen Weeks, Greg Nowling, Nobi Fuchigami, Michael Bowes and Karl Littau
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Ultraviolet photodetector based on $Mg_xZn_{1-x}O$ films using plasma-enhanced atomic layer deposition

Yu-Chang Lin, Hsin-Ying Lee and Ching-Ting Lee
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Atomic layer deposition of NiS and its application as cathode material in dye sensitized solar cell

Neha Mahuli and Shaibal K. Sarkar
J. Vac. Sci. Technol. A **34**, 01A142 (2016);
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Standing and sitting adlayers in atomic layer deposition of ZnO

Zhengning Gao, Fei Wu, Yoon Myung, Ruixiang Fei, Ravindra Kanjolia, Li Yang and Parag Banerjee
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Thickness-dependent growth orientation of F-doped ZnO films formed by atomic layer deposition

Kyung-Mun Kang, Yong-June Choi, Geun Young Yeom and Hyung-Ho Park
J. Vac. Sci. Technol. A **34**, 01A144 (2016);
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Periodic oxidation for fabricating titanium oxynitride thin films via atomic layer deposition

Shinya Iwashita, Shintaro Aoyama, Masayuki Nasu, Kouji Shimomura, Naotaka Noro, Toshio Hasegawa, Yasushi Akasaka and Kohei Miyashita
J. Vac. Sci. Technol. A **34**, 01A145 (2016);
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Spatial atomic layer deposition on flexible porous substrates: ZnO on anodic aluminum oxide films and Al_2O_3 on Li ion battery electrodes

Kashish Sharma, Dmitri Routkevitch, Natalia Varaksa and Steven M. George
J. Vac. Sci. Technol. A **34**, 01A146 (2016);
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Low-temperature atomic layer deposition of TiO_2 thin layers for the processing of memristive devices

Samuele Porro, Alladin Jasmin, Katarzyna Bejtka, Daniele Conti, Denis Perrone,Salvatore Guastella, Candido F. Pirri, Alessandro Chiolerio and Carlo Ricciardi
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Inherent substrate-dependent growth initiation and selective-area atomic layer deposition of TiO_2 using “water-free” metal-halide/metal alkoxide reactants

Sarah E. Atanasov, Berç Kalanyan and Gregory N. Parsons
J. Vac. Sci. Technol. A **34**, 01A148 (2016);
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Probabilistic distributions of pinhole defects in atomic layer deposited films on polymeric substrates

Alexander S. Yersak and Yung-Cheng Lee
J. Vac. Sci. Technol. A **34**, 01A149 (2016);
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Simulation of nucleation and growth of atomic layer deposition phosphorus for doping of advanced FinFETs

Thomas E. Seidel, Alexander Goldberg, Mat D. Halls and Michael I. Current
J. Vac. Sci. Technol. A **34**, 01A150 (2016);
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Properties of nanostructured undoped ZrO_2 thin film electrolytes by plasma enhanced atomic layer deposition for thin film solid oxide fuel cells

Gu Young Cho, Seungtak Noh, Yoon Ho Lee, Sanghoon Ji, Soon Wook Hong,Bongjun Koo, Jihwan An, Young-Beom Kim and Suk Won Cha
J. Vac. Sci. Technol. A **34**, 01A151 (2016);
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Low temperature platinum atomic layer deposition on nylon-6 for highly conductive and catalytic fiber mats

J. Zachary Mundy, Arya Shafiefarhood, Fanxing Li, Saad A. Khan and Gregory N. Parsons
J. Vac. Sci. Technol. A **34**, 01A152 (2016);
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TOP

ATOMIC LAYER ETCHING (ALE)

S

Fluorocarbon assisted atomic layer etching of SiO_2 and Si using cyclic Ar/C_4F_8 and Ar/CHF_3 plasma

Dominik Metzler, Chen Li, Sebastian Engelmann, Robert L. Bruce, Eric A. Joseph and Gottlieb S. Oehrlein
J. Vac. Sci. Technol. A **34**, 01B101 (2016);
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Application of cyclic fluorocarbon/argon discharges to device patterning

Dominik Metzler, Kishore Uppireddi, Robert L. Bruce, Hiroyuki Miyazoe, Yu Zhu,William Price, Ed S. Sikorski, Chen Li, Sebastian U. Engelmann, Eric A. Joseph and Gottlieb S. Oehrlein
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Initial evaluation and comparison of plasma damage to atomic layer carbon materials using conventional and low T_e plasma sources

Ashish V. Jagtiani, Hiroyuki Miyazoe, Josephine Chang, Damon B. Farmer,Michael Engel, Deborah Neumayer, Shu-Jen Han, Sebastian U. Engelmann,David R. Boris, Sandra C. Hernández, Evgeniya H. Lock, Scott G. Walton and Eric A. Joseph
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