

Review Articles

OpenJanuary 2018

Review Article: Catalysts design and synthesis via selective atomic layer deposition

Kun Cao, Jiaming Cai, Xiao Liu, and Rong Chen

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 010801 (2018); <https://doi.org/10.1116/1.5000587>

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Special Issue on Atomic Layer Deposition (ALD)

FullJanuary 2018

Thermal study of an indium trisguanidinate as a possible indium nitride precursor

Sydney C. Buttera, Karl Rönby, Henrik Pedersen, Lars Ojamäe more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A101 (2018); <https://doi.org/10.1116/1.5002634>

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Atomic layer deposition of Ti-Nb-O thin films onto electrospun fibers for fibrous and tubular catalyst support structures

Matti Putkonen, Pirjo Heikkilä, Antti T. Pasanen, Hille Rautkoski more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A102 (2018); <https://doi.org/10.1116/1.4999826>

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Tailoring nanopore formation in atomic layer deposited ultrathin films

Saurabh Karwal, Tao Li, Angel Yanguas-Gil, Christian P. Canlas more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A103 (2018); <https://doi.org/10.1116/1.5003360>

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FullJanuary 2018

Thermal atomic layer deposition of tungsten carbide films from WCl_6 and $AlMe_3$

Kyle J. Blakeney, and Charles H. Winter

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A104 (2018); <https://doi.org/10.1116/1.5002667>

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Nucleation mechanism during WS_2 plasma enhanced atomic layer deposition on amorphous Al_2O_3 and sapphire substrates

Benjamin Groven, Ankit Nalin Mehta, Hugo Bender, Quentin Smets more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A105 (2018); <https://doi.org/10.1116/1.5003361>

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Room-temperature plasma enhanced atomic layer deposition of aluminum silicate and its application in dye-sensitized solar cells

Takahiro Imai, Yoshiharu Mori, Kensaku Kanomata, Masanori Miura more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A106 (2018); <https://doi.org/10.1116/1.5002716>

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Graphene as plasma-compatible blocking layer material for area-selective atomic layer deposition: A feasibility study for III-nitrides

Petro Deminskyi, Ali Haider, Evgeniya Kovalska, and Necmi Biyikli

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A107 (2018); <https://doi.org/10.1116/1.5003421>

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Comparison on atomic/molecular layer deposition grown aluminum alkoxide polymer films using alkane and alkyne organic precursors

Devika Choudhury, Gopalan Rajaraman, and Shaibal K. Sarkar

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A108 (2018); <https://doi.org/10.1116/1.4990776>

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Tuning of material properties of ZnO thin films grown by plasma-enhanced atomic layer deposition at room temperature

Julian Pilz, Alberto Perrotta, Paul Christian, Martin Tazreiter more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A109 (2018); <https://doi.org/10.1116/1.5003334>

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FullJanuary 2018

Influence of N₂/H₂ and N₂ plasma on binary III-nitride films prepared by hollow-cathode plasma-assisted atomic layer deposition

Mustafa Alevli, and Nese Gungor

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A110 (2018); <https://doi.org/10.1116/1.4998920>

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FullJanuary 2018

Measurements and modeling of the impact of radical recombination on silicon nitride growth in microwave plasma assisted atomic layer deposition

Toshihiko Iwao, Peter L. G. Ventzek, Rochan Upadhyay, Laxminarayan L. Raja more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A111 (2018); <https://doi.org/10.1116/1.5003403>

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Atmospheric pressure plasma enhanced spatial atomic layer deposition of SnO_x as conductive gas diffusion barrier

Lukas Hoffmann, Detlef Theirich, Daniel Schlamm, Tim Hasselmann more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A112 (2018); <https://doi.org/10.1116/1.5006781>

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Plasma enhanced atomic layer deposition of aluminum sulfide thin films

Jakob Kuhs, Zeger Hens, and Christophe Detavernier

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A113 (2018); <https://doi.org/10.1116/1.5003339>

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Long-term ambient surface oxidation of titanium oxynitride films prepared by plasma-enhanced atomic layer deposition: An XPS

study

Małgorzata Kot, Justyna Łobaza, Franziska Naumann, Hassan Gargouri more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A114 (2018); <https://doi.org/10.1116/1.5003356>

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Grazing-incidence small angle x-ray scattering, x-ray reflectivity, and atomic force microscopy: A combined approach to assess atomic-layer-deposited Al₂O₃ dielectric films

Chao Li, Firouz Shahriarian, and Mark S. Goorsky

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A115 (2018); <https://doi.org/10.1116/1.5003422>

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Hydrogen passivation of silicon/silicon oxide interface by atomic layer deposited hafnium oxide and impact of silicon oxide underlayer

Evan Oudot, Mickael Gros-Jean, Kristell Courouble, Francois Bertin more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A116 (2018); <https://doi.org/10.1116/1.4999561>

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Spatial molecular layer deposition of polyamide thin films on flexible polymer substrates using a rotating cylinder reactor

Daniel J. Higgs, Jaime W. DuMont, Kashish Sharma, and Steven M. George

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A117 (2018); <https://doi.org/10.1116/1.5004041>

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Electron-enhanced atomic layer deposition of silicon thin films at room temperature

Jaclyn K. Sprenger, Huaxing Sun, Andrew S. Cavanagh, and Steven M. George

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A118 (2018); <https://doi.org/10.1116/1.5006696>

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Plasma-enhanced atomic layer deposition of nickel thin film using bis(1,4-diisopropyl-1,4-diazabutadiene)nickel

Jae-Min Park, Seongyoon Kim, June Hwang, Won Seok Han more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A119 (2018); <https://doi.org/10.1116/1.5003388>

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Influence of the atomic layer deposition temperature on the structural and electrical properties of Al/Al₂O₃/p-Ge MOS structures

Martha A. Botzakaki, George Skoulatakis, Nikolaos Xanthopoulos, Violetta Gianneta more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A120 (2018); <https://doi.org/10.1116/1.5003375>

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Growth behavior and structural analysis of atomic layer deposited Sn_xTi_{1-x}O_y films

Siliang Chang, and Christos G. Takoudis

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A121 (2018); <https://doi.org/10.1116/1.5004993>

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Tribological properties of thin films made by atomic layer deposition sliding against silicon

Lauri Kilpi, Oili M. E. Ylivaara, Antti Vaajoki, Xuwen Liu more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A122 (2018); <https://doi.org/10.1116/1.5003729>

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Spatial atomic layer deposition for coating flexible porous Li-ion battery electrodes

Alexander S. Yersak, Kashish Sharma, Jasmine M. Wallas, Arrelaine A. Dameron more...

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Atomic layer deposition frequency-multiplied Fresnel zone plates for hard x-rays focusing

Nicolaie Moldovan, Ralu Divan, Hongjun Zeng, Leonidas E. Ocola more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A124 (2018); <https://doi.org/10.1116/1.5003412>

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Atomic layer deposition of molybdenum disulfide films using MoF₆ and H₂S

Anil U. Mane, Steven Letourneau, David J. Mandia, Jian Liu more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A125 (2018); <https://doi.org/10.1116/1.5003423>

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Atomically dispersed vanadium oxides on multiwalled carbon nanotubes via atomic layer deposition: A multiparameter optimization

Pascal Dungen, Mark Greiner, Karl-Heinz Böhm, Ioannis Spanos more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01A126 (2018); <https://doi.org/10.1116/1.5006783>

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Investigation of the influence of oxygen plasma on supported silver nanoparticles

Yichen Duan, Sana Rani, John T. Newberg, and Andrew V. Teplyakov

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01B101 (2018); <https://doi.org/10.1116/1.4986208>

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Patterned films by atomic layer deposition using Parafilm as a mask

Chao Zhang, Jesse Kalliomäki, Markku Leskelä, and Mikko Ritala

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01B102 (2018); <https://doi.org/10.1116/1.5001033>

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Plasma-enhanced atomic layer deposition of tungsten oxide thin films using (^tBuN)₂(Me₂N)₂W and O₂ plasma

Shashank Balasubramanyam, Akhil Sharma, Vincent Vandalon, Harm C. M. Knoop more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01B103 (2018); <https://doi.org/10.1116/1.4986202>

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Special Issue on Atomic Layer Etching (ALE)

FullJanuary 2018

Thermal adsorption-enhanced atomic layer etching of Si₃N₄

Woo-Hee Kim, Dougyong Sung, Sejin Oh, Jehun Woo more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01B104 (2018); <https://doi.org/10.1116/1.5003271>

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Applying sputtering theory to directional atomic layer etching

Ivan L. Berry, Keren J. Kanarik, Thorsten Lill, Samantha Tan more...

Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **36**, 01B105 (2018); <https://doi.org/10.1116/1.5003393>

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Quasi atomic layer etching of SiO₂ using plasma fluorination for surface cleaning

Kyongbeom Koh, Yongjae Kim, Chang-Koo Kim, and Heeyeop Chae

