

Publications

2016

1. Endotaxial growth of CoSi₂ nanowires on Si(001) surface: The influence of surface reconstruction
B. L. Ong, S. W. Ong, and **E. S. Tok**
Surface Science **647**, (2016) 84
2. Single Crystalline Germanium-Lead Formed by Laser-Induced Epitaxy
Q. Zhou, E. B. Ong, S. L. Lim, S. Vajandar, T. Osipowicz, X. Gong, **E. S. Tok**, and Y. C. Yeo
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3. In-situ gallium-doping for forming p(+) germanium-tin and application in germanium-tin p-i-n photodetector
W. Wang, S. Vajandar, S. L. Lim, Y. Dong, V. R. D'Costa, T. Osipowicz, **E. S. Tok**, and Y. C. Yeo
Journal of Applied Physics **119**, (2016) 8
4. Growth and characterization of highly tensile strained Ge_{1-x}Sn_x formed on relaxed In_yGa_{1-y}P buffer layers
W. Wang, W. K. Loke, T. T. Yin, Z. Zhang, V. R. D'Costa, Y. Dong, G. C. Liang, J. S. Pan, Z. X. Shen, S. F. Yoon, **E. S. Tok**, and Y. C. Yeo
Journal of Applied Physics **119**, (2016) 7
5. Germanium-tin interdiffusion in strained Ge/GeSn multiple-quantum-well structure
W. Wang, Y. Dong, Q. Zhou, **E. S. Tok**, and Y. C. Yeo
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6. Photoconductivity in VO₂-ZnO Inter-Nanowire Junction and Nanonetwork Device
B. Mukherjee, B. Varghese, M. R. Zheng, **E. S. Tok**, E. Simsek, and C. H. Sow
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7. Molecular Nanocorrals on Si(111)-(7x7): Temperature-Dependent Site Selectivity
W. Mao, J. H. He, Y. J. Xi, W. Chen, K. Wu, C. Zhang, **E. S. Tok**, and G. Q. Xu
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8. Interactions between lasers and two-dimensional transition metal dichalcogenides
J. P. Lu, H. W. Liu, **E. S. Tok**, and C. H. Sow
Chemical Society Reviews **45**, (2016) 2494
9. Enhanced Photoresponse from Phosphorene-Phosphorene-Suboxide Junction Fashioned by Focused Laser Micromachining
J. P. Lu, A. Carvalho, J. Wu, H. W. Liu, **E. S. Tok**, A. H. C. Neto, B. Ozyilmaz, and C. H. Sow
Advanced Materials **28**, (2016) 4090

10. Fluorescence Concentric Triangles: A Case of Chemical Heterogeneity in WS₂ Atomic Monolayer
H. W. Liu, J. P. Lu, K. Ho, Z. L. Hu, Z. Y. Dang, A. Carvalho, H. R. Tan, **E. S. Tok**, and C. H. Sow
Nano Letters **16**, (2016) 5559
11. Dehydrogenation of Alcohols over Alumina-Supported Silver Catalysts: The Role of Oxygen in Hydrogen Formation
H. H. Liu, H. R. Tan, **E. S. Tok**, S. Jaenicke, and G. K. Chuah
Chemcatchem **8**, (2016) 968
12. Ge_{0.83}Sn_{0.17} p-channel metal-oxide-semiconductor field-effect transistors: Impact of sulfur passivation on gate stack quality
D. Lei, W. Wang, Z. Zhang, J. S. Pan, X. Gong, G. C. Liang, **E. S. Tok**, and Y. C. Yeo
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13. R. G. Krishnan, X. Ke, S. A. Kumar, **E. S. Tok**, G. Y. Raaj, G. Srayes, M. Pecht, and I. C. Soc, in *2016 Ieee 66th Electronic Components and Technology Conference* (Ieee Computer Soc, Los Alamitos, 2016), p. 2196.
14. Enhanced activity of H₂O₂-treated copper(II) oxide nanostructures for the electrochemical evolution of oxygen
A. D. Handoko, S. Z. Deng, Y. L. Deng, A. W. F. Cheng, K. W. Chan, H. R. Tan, Y. L. Pan, **E. S. Tok**, C. H. Sow, and B. S. Yeo
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15. Influence of hydrogen surface passivation on Sn segregation, aggregation, and distribution in GeSn/Ge(001) materials
H. Johll, M. Samuel, R. Y. Koo, H. C. Kang, Y. C. Yeo, and **E. S. Tok**
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16. X-ray-induced Cu deposition and patterning on insulators at room temperature
P. C. Hsu, Y. S. Chen, Y. K. Hwu, J. H. Je, G. Margaritondo, and **E. S. Tok**
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17. Nucleation and growth of Ge nanoclusters on the Si(111)-(7x7) surface studied by scanning tunneling microscopy
Y. P. Zhang, Z. Q. Chen, G. Q. Xu, and **E. S. Tok**
Surface and Interface Analysis **47**, (2015) 222
18. Critical thickness for strain relaxation of Ge_{1-x}Sn_x (x <= 0.17) grown by molecular beam epitaxy on Ge(001)
W. Wang, Q. Zhou, Y. Dong, **E. S. Tok**, and Y. C. Yeo
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19. Self-assembly of tin wires via phase transformation of heteroepitaxial germanium-tin on germanium substrate
W. Wang, L. Z. Li, **E. S. Tok**, and Y. C. Yeo
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20. Post-growth annealing of germanium-tin alloys using pulsed excimer laser
L. X. Wang, W. Wang, Q. Zhou, J. S. Pan, Z. Zhang, **E. S. Tok**, and Y. C. Yeo
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21. Spontaneous decoration of Au nanoparticles on micro-patterned reduced graphene oxide shaped by focused laser beam
Y. C. Wan, H. F. Teoh, **E. S. Tok**, and C. H. Sow
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22. Effect of orbital and ionic dynamics coupling in barrier crossing rates for Car-Parrinello molecular dynamics
L. N. Mohanam, S. W. Ong, **E. S. Tok**, and H. C. Kang
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23. Preservation of epoxy groups on surfaces in the covalent attachment of butadiene monoxide on Si(111)-(7x7): the effect of a vinyl substituent
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Chemical Communications **51**, (2015) 14195
24. Microlandscaping of Au Nanoparticles on Few-Layer MoS₂ Films for Chemical Sensing
J. P. Lu, J. H. Lu, H. W. Liu, B. Liu, L. L. Gong, **E. S. Tok**, K. P. Loh, and C. H. Sow
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25. Atomic Healing of Defects in Transition Metal Dichalcogenides
J. P. Lu, A. Carvalho, X. K. Chan, H. W. Liu, B. Liu, **E. S. Tok**, K. P. Loh, A. H. C. Neto, and C. H. Sow
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27. Gold nanoparticles: BSA (Bovine Serum Albumin) coating and X-ray irradiation produce variable-spectrum photoluminescence
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C. Ke, W. G. Zhu, Z. Zhang, **E. S. Tok**, and J. S. Pan
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30. Thickness-Induced Metal-Insulator Transition in Sb-doped SnO₂ Ultrathin Films: The Role of Quantum Confinement
C. Ke, W. G. Zhu, Z. Zhang, **E. S. Tok**, B. Ling, and J. S. Pan
Scientific Reports **5**, (2015) 10
31. Suppression of dark current in germanium-tin on silicon p-i-n photodiode by a silicon surface passivation technique
Y. Dong, W. Wang, D. Lei, X. Gong, Q. Zhou, S. Y. Lee, W. K. Loke, S. F. Yoon, **E. S. Tok**, G. C. Liang, and Y. C. Yeo
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32. Etching of germanium-tin using ammonia peroxide mixture
Y. Dong, B. L. Ong, W. Wang, Z. Zhang, J. S. Pan, X. Gong, **E. S. Tok**, G. Liang, and Y. C. Yeo
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33. Detrimental Effects of Oxygen Vacancies in Electrochromic Molybdenum Oxide
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35. Reaction Mechanism and Regioselectivity of Methyl Oxirane on Si(111)-(7 x 7)
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36. Orbital resolution of molecules covalently attached to a clean semiconductor surface
J. H. He, W. Mao, G. Q. Xu, and **E. S. Tok**
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37. Germanium-Lead Alloy with 0.3% Substitutional Lead formed by Pulsed Laser Induced Epitaxy
Q. Zhou, C. Zhan, X. Gong, T. K. Chan, T. Osipowicz, S. L. Lim, **E. S. Tok**, Y. C. Yeo, and Ieee
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38. Single Crystalline Germanium-Lad Alloy on Germanium Substrate Formed by Pulsed Laser Epitaxy
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39. Thermal Stability of Highly Compressive Strained Germanium-Tin (GeSn) Grown by Molecular Beam Epitaxy
W. Wang, Q. Zhou, J. S. Pan, Z. Zhang, **E. S. Tok**, Y. C. Yeo, and Ieee
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40. Growth of Tensile-Strained Ge Layer and Highly Strain-Relaxed Ge_{1-x}Sn_x Buffer Layer on Silicon by Molecular Beam Epitaxy
W. Wang, **E. S. Tok**, Y. C. Yeo, and Ieee
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41. Tin surface segregation, desorption, and island formation during post-growth annealing of strained epitaxial Ge_{1-x}Sn_x layer on Ge(001) substrate
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43. Band alignment study of lattice-matched In_{0.49}Ga_{0.51}P and Ge using x-ray photoelectron spectroscopy
M. H. S. Owen, Q. Zhou, X. Gong, Z. Zhang, J. S. Pan, W. K. Loke, S. Wicaksono, S. F. Yoon, **E. S. Tok**, and Y. C. Yeo
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45. Direct laser micropatterning of GeSe₂ nanostructures film with controlled optoelectrical properties
B. Mukherjee, G. Murali, S. X. Lim, M. R. Zheng, **E. S. Tok**, and C. H. Sow
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J. P. Lu, H. W. Liu, M. R. Zheng, H. J. Zhang, S. X. Lim, **E. S. Tok**, and C. H. Sow
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47. Strain-induced Morphological Instability and Self Assembly of Tin Wires during Controlled Annealing of $\text{Ge}_{0.83}\text{Sn}_{0.17}$ epitaxial film on Ge(001) Substrate
L. Z. Li, W. Wang, **E. S. Tok**, Y. C. Yeo, and Ieee
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48. High Mobility Germanium-Tin ($\text{Ge}_{0.930}\text{Sn}_{0.070}$) P-MOSFETs with Surface Passivation by Silicon Atomic Layer Epitaxy
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49. Silicon Surface Passivation Technology for Germanium-Tin P-Channel MOSFETs: Suppression of Germanium and Tin Segregation for Mobility Enhancement
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