

215 publications, h-index: 38 (Google Scholar)

**2018**

J. Spitaler and S.K. Estreicher, *Perspectives on the theory of defects*, chapter in “Density-Functional Theory and Beyond - Electronic Structure Theory Simulations of Materials and Molecules”, ed. C. Baldauf, V. Blum, and M. Scheffler (to be published)

C.M. Stanley and S.K. Estreicher, *Thermal properties of oxide layers in silicon: a first-principles study*, **Physica Status Solidi a** **2018**, 1800428/1-9 (2018) – DOI: 10.1002/pssa.20181800428

S. K. Estreicher, T. M. Vincent, and C. M. Stanley, Removing heat from Si with a ‘thermal circuit’: an ab-initio study, **Physica Status Solidi a** **2018**, 1800427/1-8 (2018) – DOI: 10.1002/pssa.201800427

S. K. Estreicher, Wine, **Encyclopedia of Ancient History (2018 rev.)** ed. K. Brodersen, A. Erskine, and D. Hollander (Wiley-Blackwell, 2018), 6 pages.

**2017**

S.K. Estreicher, *The beginning of wine and viticulture*  
**Physica Status Solidi c** **14**, 1700008/1-5 (2017) <http://onlinelibrary.wiley.com/doi/10.1002/pssc.201700008/full>

C.M. Stanley and S.K. Estreicher, *Heat flow across an oxide layer in Si*,  
**Physica Status Solidi a** **214**, 1700204/1-5 (2017)

T.M. Gibbons, D.J. Backlund, and S.K. Estreicher, *Cobalt-related defects in silicon*  
**Journal of Applied Physics** **121**, 045704/1-6 (2017)

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D.J. Backlund, T.M. Gibbons, and S.K. Estreicher, *Vanadium interactions in crystalline silicon*  
**Physical Review B** **94**, 195210/1-6 (2016)

M.B. Bebek, C.M. Stanley, T.M. Gibbons, and S.K. Estreicher, *Temperature dependence of phonon-defect interactions: phonon scattering vs. phonon trapping*  
**Nature Scientific Reports** **6**, 32150/1-10 (2016) DOI: 10.1038/srep32150 <http://rdcu.be/pLJe>

S.K. Estreicher, T.M. Gibbons, M.B. Bebek, and A. Cardona, *Heat flow and defects in semiconductors: beyond the phonon scattering assumption*  
**Solid State Phenomena** **242**, 335-343 (2016)

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S.K. Estreicher, Wine  
**Encyclopedia of Ancient History (2<sup>nd</sup> ed.)** ed. R.S. Bagnall, K. Brodersen, C.B. Champion, A. Erskine, and S.R. Huebner (Wiley Blackwell, 2015), <http://onlinelibrary.wiley.com/book/10.1002/9781444338386>, 6 pages.

T. M. Gibbons, M. B. Bebek, By. Kang, C.M. Stanley, and S. K. Estreicher, *Phonon-phonon interactions: first principles theory*  
**Journal of Applied Physics** **118**, 085103/1-8 (2015)

S.K. Estreicher, T.M. Gibbons, and M.B. Bebek, *Heat flow and defects in semiconductors: the physical reason why defects reduce heat flow, and how to control it*.  
**Journal of Applied Physics** **117**, 112801/1-6 (2015)

S. K. Estreicher and A. McDonald (**editors**), *Proc. 32<sup>nd</sup> International Conference on the Physics of Semiconductors*,  
**Journal of Applied Physics** **117**, (2015).

S.K. Estreicher, M. Stavola, and J. Weber, *Hydrogen in Si and Ge*, in ‘Silicon, Germanium, and Their Alloys: Growth, Defects, Impurities, and Nanocrystals’, ed. G. Kissinger and S. Pizzini (CRC, Boca Raton, 2015), 217-254.

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**European Review** **22** (3), 504-537 (2014)

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**Physical Review B** **89**, 155409/1-9 (2014)

A. Cavallini and S. K. Estreicher (**editors**), *Proc. 27<sup>th</sup> International Conference on Defects in Semiconductors*,  
**Journal of Applied Physics** **115** (2014) (plenary and invited papers)

Preface: **Journal of Applied Physics** **115**, 011901 (2014)

An Erratum goes with the Preface. How did that happen? **JAP** **115**, 049901 (2014)

**American Institute of Physics Proceedings** <http://scitation.aip.org/content/aip/proceeding/aipcp/1583> (contributed)

S.K. Estreicher, T.M. Gibbons, By. Kang, and M.B. Bebek, *Phonons and defects in semiconductors and nanostructures: phonon trapping, phonon scattering, and heat flow at heterojunctions*  
**Journal of Applied Physics** **115**, 012012/1-8 (2014)

S.K. Estreicher, T.M. Gibbons, and M. Stavola, *Isotope-dependent phonon trapping at defects in semiconductors*  
**Solid State Phenomena** **205-206**, 209-212 (2014)

M. Stavola, S.K. Estreicher, and M. Seacrist, *Light-element impurities and their reactions in multicrystalline Si*  
**Solid State Phenomena** **205-206**, 201-208 (2014)

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*Nickel: a very fast diffuser in Si*  
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T.M. Gibbons, S.K. Estreicher, K. Potter, F. Bekisli, and M. Stavola, *Huge isotope effect on the vibrational lifetimes of an  $H_2^*$ (C) defect in Si*  
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S.K. Estreicher and A. Carvalho, *The  $Cu_{PL}$  defect and the  $Cu_{s1}Cu_{i3}$  complex*  
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A. Docaj and S.K. Estreicher, *Three carbon pairs in Si*  
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C. Peng, H. Zhang, M. Stavola, W. Beall Fowler, B. Esham, S.K. Estreicher, A. Docaj, L. Carnel, and M. Seacrist,  
*Microscopic structure of a  $VH_4$  center trapped by C in Si*  
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**Physical Review B** **82**, 1155208/1-8 (2010)

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**Physical Review B** **81**, 235213/1-8 (2010)

S.K. Estreicher, D. Backlund, and T.M. Gibbons, *Theory of Defects in Si and Ge: past, present and recent developments*  
**Thin Solid Films** **518**, 2413-2417 (2010)

S.K. Estreicher and D.J. Backlund, *Electrically active and electrically inactive 3d transition metal centers in Si*  
**Materials Research Society Proceedings** **1268**, 3-11 (2010)

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**Physica B 404**, 4509-4514 (2009)

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**Physica B 404**, 4337-4340 (2009)

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S.K. Estreicher, D. Backlund, T.M. Gibbons, and A. Doçaj, *Vibrational properties of impurities in semiconductors*  
**Modelling Simul. Mater. Sci. Eng. 17**, 084006/1-14 (2009)

S.K. Estreicher, *Controlling the properties of materials with impurities: What's new?*  
**Physics @ TTU** (Physics Department annual review, Spring 2009)

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N. Gonzalez Szwacki, M. Sanati, and S.K. Estreicher, *Two {FeH} pairs in Si and their implications*  
**Physical Review B 78**, 113202/1-4 (2008, Brief Report)

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