

# André da Silva Schneider

## Publications

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### publications

#### articles in peer-reviewed journals

[1] Pasta nucleosynthesis: Molecular dynamics simulations of nuclear statistical equilibrium  
M. E. Caplan, **A. S. Schneider**, C. J. Horowitz, D. K. Berry  
[Phys. Rev. C 91 065802 \(2015\)](#)

[2] Disordered Nuclear Pasta, Magnetic Field Decay, and Crust Cooling in Neutron Stars  
C. J. Horowitz, D. K. Berry, C. M. Briggs, M. E. Caplan, A. Cumming, **A. S. Schneider**  
[Phys. Rev. Lett. 114 031102 \(2015\)](#)

[3] Nuclear “waffles”  
**A. S. Schneider**, D. K. Berry, C. M. Briggs, M. E. Caplan, C. J. Horowitz  
[Phys. Rev. C 90 055805 \(2014\)](#)

[4] Nuclear “pasta” formation  
**A. S. Schneider**, C. J. Horowitz, J. Hughto, D. K. Berry  
[Phys. Rev. C 88 065807 \(2013\)](#)

[5] Direct molecular dynamics simulation of liquid-solid phase equilibria for a three-component plasma  
J. Hughto, C. J. Horowitz, **A. S. Schneider**, Zach Medin, Andrew Cumming, D. K. Berry  
[Phys. Rev. E 86 066413 \(2012\)](#)

[6] Direct molecular dynamics simulation of liquid-solid phase equilibria for two-component plasmas  
**A. S. Schneider**, J. Hughto, C. J. Horowitz, D. K. Berry  
[Phys. Rev. E 85 066405 \(2012\)](#)

[7] Diffusion in Coulomb crystals  
J. Hughto, **A. S. Schneider**, C. J. Horowitz, D. K. Berry  
[Phys. Rev. E 84 016401 \(2011\)](#)

[8] Diffusion of neon in white dwarf stars  
J. Hughto, **A. S. Schneider**, C. J. Horowitz, D. K. Berry  
[Phys. Rev. E 82 066401 \(2010\)](#)

[9] Compact stars with a quark core within the Nambu–Jona-Lasinio (NJL) model  
C. H. Lenzi, **A. S. Schneider**, C. Providência, R. M. Marinho  
[Phys. Rev. C 82 015809 \(2010\)](#)

[10] Crystallization of Carbon-Oxygen Mixtures in White Dwarf Stars  
C. J. Horowitz, **A. S. Schneider**, D. K. Berry  
[Phys. Rev. Lett. 104 231101 \(2010\)](#)

[11] Reexamining the neutron skin thickness within a density dependent hadronic model  
S. S. Avancini, J. R. Marinelli, D. P. Menezes, M. M. W. Moraes, **A. S. Schneider**  
[Phys. Rev. C 76 064318 \(2007\)](#)

#### book chapters

[1] Neutron Star Crust and Molecular Dynamics Simulation

C. J. Horowitz, J. Hughto, **A. S. Schneider**, D. K. Berry

Chapter in: Neutron Star Crust, ISBN: 978-1-62081-902-9

C. Bertulani and J. Piekarewicz, eds., Nova Science Publishers, Inc., (2012), Hauppauge, NY

## conference proceedings

[1] Phase diagram of carbon-oxygen plasma mixtures in white dwarf stars

**A. S. Schneider**, C. J. Horowitz, J. Hughto, D. K. Berry

Journal of Physics: Conference Series vol. 402 012026 (2012)

[2] Relativistic Hadronic Models and Parity Violating Lepton Scattering

C. A. Graeff, **A. S. Schneider**, J. R. Marinelli

International Journal of Modern Physics E vol. 16 3028–3031 (2007)

## submitted or in preparation

[1] *Parking-garage structures in astrophysics and Biophysics*

C. J. Horowitz, D. K. Berry, M. E. Caplan, Greg Huber, **A. S. Schneider**

submitted to Phys. Rev. Lett. (2015)

[2] *Nuclear "pasta" structure factor and observables*

**A. S. Schneider**, D. K. Berry, M. E. Caplan, C. J. Horowitz, Z. Lin

in preparation (2015)