

Publications and patents, Susanne Friederike Viefers

Publications in refereed journals:

- 1) **S. Viefers**, F. Ravndal and T. Haugset,
“Ideal Quantum Gases in Two Dimensions”,
Am.J.Phys. **63**, 369 (1995).
- 2) T.H. Hansson, J.M. Leinaas and **S. Viefers**,
“Field Theory of Anyons in the Lowest Landau Level”,
Nucl.Phys. **B 470** (1996) 291.
- 3) S.B. Isakov and **S. Viefers**,
“Model of statistically Coupled Chiral Fields on the Circle”,
Int.J.Mod.Phys. **A 12** (1997) 1895.
- 4) J.M. Leinaas and **S. Viefers**,
“Bulk and edge properties of the Chern-Simons Ginzburg-Landau
theory of the fractional quantum Hall effect”,
Nucl. Phys. **B 520** (1998) 675.
- 5) T.H. Hansson and **S. Viefers**,
“Edge Theories for Polarized Quantum Hall States”
Phys. Rev. **B 61**, 7553 (2000).
- 6) S.M. Reimann, M. Koskinen, **S. Viefers**, M. Manninen and B. Mottelson,
“Broken Symmetries in the Reconstruction of $\nu = 1$ Quantum Hall Edges”,
Physica **E 6**, 120 (2000).
- 7) **S. Viefers**, S.M. Reimann and T.H. Hansson,
“Bose Condensates at High Angular Momenta”,
Phys. Rev. **A 62**, 53604 (2000).
- 8) R.K. Bhaduri, S.M. Reimann, **S. Viefers**, A. Ghose Choudhury and M.K. Srivastava
“The effect of interactions on Bose-Einstein condensation
in a quasi two-dimensional harmonic trap”
J. Phys. **B 33**, 3895 (2000).
- 9) **S. Viefers**, P. Singha Deo, M. Koskinen, S.M. Reimann and M. Manninen,
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Phys. Rev. **B 62**, 10668 (2000).
- 10) T. H. Hansson, J. M. Leinaas and **S. Viefers**,
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Phys. Rev. Lett. **86**, 2930 (2001).
- 11) **S. Viefers**, T. H. Hansson and J. M. Leinaas,
“Exclusion statistics in a two-dimensional trapped Bose gas”,
J. Phys. **B 34**, 4609 (2001).

- 12) M. Manninen, **S. Viefers**, M. Koskinen and S.M. Reimann,
 “Many-body spectrum and particle localization in
 quantum dots and finite rotating Bose condensates”,
Phys. Rev. B **64**, 245322 (2001).
- 13) J.M. Kinaret, T. Nord and **S. Viefers**,
 ”A carbon nanotube-based nanorelay”,
Applied Physics Letters **82**, 1287 (2003).
 (And *Virtual Journal of Nanoscale Science and Technology*,
 Volume 7, Issue 9, March 3 (2003).)
- 14) M. Jonsson, T. Nord, **S. Viefers**, and J.M. Kinaret,
 “Effects of short range forces on a three terminal nanorelay”,
Proceedings of the Electrochemical Society: Fullerenes Vol. 13
 – *Fullerenes and Nanotubes: The Building Blocks of Next Generation Nanodevices*,
 editors D.M. Guildi, P.V. Kamat and F.D. Souza, (Electrochemical Society, Pennington, 2003).
- 15) **S. Viefers**, M. Manninen, P.S. Deo, and P. Koskinen,
 “Quantum Rings: Energy spectrum and persistent current”
 Invited review paper, *Physica E* **21**, 1 (2004).
- 16) R.Y. Chiao, T.H. Hansson, J.M. Leinaas, and **S. Viefers**,
 ”Effective photon-photon interaction in a two-dimensional ‘photon fluid’ “
Phys. Rev. A **69**, 063816 (2004).
- 17) R.Y. Chiao, T.H. Hansson, J.M. Leinaas, and **S. Viefers**,
 ”Two-dimensional ‘photon fluid’: Effective photon-photon interaction and physical realizations”
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- 18) M. Manninen, P. Koskinen, M. Koskinen, P. Singha Deo, S.M. Reimann, and **S. Viefers**,
 “Energy spectrum, persistent current and electron localization in quantum rings”,
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- 19) L.M. Jonsson, T. Nord, **S. Viefers**, and J.M. Kinaret,
 “Effects of surface forces and phonon dissipation in a three terminal nanorelay”
J. Appl. Phys. **96**, 629 (2004).
- 20) M. Manninen, P. Koskinen, M. Koskinen, **S. Viefers** and S. Reimann,
 “Energy spectra and electron localization in quantum rings and dots”
Proceedings paper (2004).
- 21) L.M. Jonsson, S. Axelsson, T. Nord, **S. Viefers** and J. Kinaret,
 “High frequency properties of a CNT-based nanorelay”
Nanotechnology **15**, 1497 (2004).
- 22) **S. Viefers**, M.F. Christie, and F. Ferdos
 “Gender equity in higher education: A case study of gender relations in a science faculty”
European Journal of Engineering Education **31**, 15 (2006).

- 23) M.N. Koruslund and **S. Viefers**,
“Composite fermion description of rotating Bose gases at low angular momenta”,
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- 24) T.H. Hansson, C.-C. Chang, J.K. Jain and **S. Viefers**,
“Conformal field theory of composite fermions”,
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- 25) T.H. Hansson, C.-C. Chang, J.K. Jain and **S. Viefers**,
“Composite fermion wave functions as correlators in conformal field theory”,
Phys. Rev. B **76**, 075347 (2007).
- 26) **S. Viefers**,
“Quantum Hall physics in rotating Bose condensates”,
Invited review article, *J. Phys. - cond.mat.* **20**, 123202 (2008).
- 27) E. Bergholtz, T.H. Hansson, M. Hermanns, A. Karlhede and **S. Viefers**,
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Phys. Rev. B **77**, 165325 (2008).
- 28) T.H. Hansson, M. Hermanns and **S. Viefers**,
“Quantum Hall quasielectron operators in conformal field theory”,
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- 29) T.H. Hansson, M. Hermanns, N. Regnault and **S. Viefers**,
“Conformal Field Theory Approach to Abelian and Non-Abelian Quantum Hall Quasielectrons”,
Phys. Rev. Lett **102**, 166805 (2009).
- 30) **S. Viefers** and M. Taillefumier
“Asymptotically exact trial wavefunctions for yrast states of rotating Bose gases”,
J. Phys. B **43**, 155302 (2010).
- 31) J. Suorsa, **S. Viefers**, and T.H. Hansson
“Quasihole condensates in quantum Hall liquids”,
Phys. Rev. B **83**, 235130 (2011).
- 32) J. Suorsa, **S. Viefers**, and T.H. Hansson
“A general approach to quantum Hall hierarchies”,
New Journal of Physics **13**, 075006 (2011).
- 33) M. Manninen, **S. Viefers**, and S.M Reimann
“Quantum rings for beginners II: Bosons versus fermions”,
Review article, *Physica E* **46**, 119 (2012).
- 34) M.L. Meyer, G.J. Sreejith and **S. Viefers**
“Rotational properties of two-component Bose gases in the lowest Landau level”,
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- 35) M.L. Meyer, O. Liabotro and **S. Viefers**

“Linear dependencies between composite fermion states”,
J. Phys. A 49, 395201 (2016).

- 36) T.H. Hansson, M. Hermanns, S.H. Simon and **S. Viefers**
“Quantum Hall physics – hierarchies and CFT techniques”,
Rev. Mod. Phys. in press (2016).

Patents:

- 1) “Nanotube relay device”,
S. Viefers, T. Nord and J. Kinaret, US patent US 7279760 B2 (2007)
- 2) “Electromechanical nanotube tunneling device”
S. Viefers, T. Nord, J. Kinaret, M.L. Jonsson, S. Axelsson
submitted to the U.S. Patent Office on May 14, 2004 with serial number 60/570.882.