



Non-conservative Optical Forces and Brownian Vortices

By Sun, Bo / Grier, David

Condition: New. Publisher/Verlag: VDM Verlag Dr. Müller | A new type of noise-driven machine | While most applications and fundamental studies of optical trapping have focused on optical forces resulting from intensity gradients, here we explore the role of radiation pressure directed by phase gradients in beams of light. Radiation pressure turns out to be a non-conservative force and drives trapped objects out of detailed balance. Rather than undergoing equilibrium thermal fluctuations, as has been assumed for decades, a microsphere in an optical tweezer enters into a stochastic steady-state characterized by closed loops in its probability current. This surprising effect is a particular manifestation of a more general class of noise-driven machines that we call Brownian vortices. This previously unrecognized class of stochastic heat engines operates on qualitatively different principles from such extensively studied nonequilibrium systems as thermal ratchets and Brownian motors. Among its interesting properties, a Brownian vortex can reverse its direction with changes in temperature or equivalent control parameters. | Format: Paperback | Language/Sprache: english.



READ ONLINE
[6.61 MB]

Reviews

This ebook could be well worth a study, and superior to other. It really is basic but unexpected situations inside the 50 % of your ebook. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- Prof. Buford Ziemann

Complete information for publication fanatics. It is actually rally intriguing throug reading period of time. I am happy to explain how this is actually the greatest publication i actually have read inside my own daily life and may be he finest ebook for possibly.

-- Ms. Heidi Rath

Other PDFs



Read Write Inc. Phonics: Orange Set 4 Storybook 2 I Think I Want to be a Bee

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. Tim Archbold (illustrator). 209 x 149 mm. Language: N/A. Brand New Book. These engaging Storybooks provide structured practice for children learning to read the Read Write Inc. Set 1 and 2 sounds....



Your Pregnancy for the Father to Be Everything You Need to Know about Pregnancy Childbirth and Getting Ready for Your New Baby by Judith Schuler and Glade B Curtis 2003 Paperback

Book Condition: Brand New. Book Condition: Brand New.



Daddyteller: How to Be a Hero to Your Kids and Teach Them What s Really by Telling Them One Simple Story at a Time

Createspace, United States, 2013. Paperback. Book Condition: New. 214 x 149 mm. Language: English . Brand New Book ***** Print on Demand *****.You have the power, Dad, to influence and educate your child. You can teach your child about a virtue or...



Becoming Barenaked: Leaving a Six Figure Career, Selling All of Our Crap, Pulling the Kids Out of School, and Buying an RV We Hit the Road in Search Our Own American Dream. Redefining What It Meant to Be a Family in America.

Createspace, United States, 2015. Paperback. Book Condition: New. 258 x 208 mm. Language: English . Brand New Book ***** Print on Demand *****.This isn t porn. Everyone always asks and some of our family thinks it is for sure.but its not....



Self Esteem for Women: 10 Principles for Building Self Confidence and How to Be Happy in Life (Free Living, Happy Life, Overcoming Fear, Beauty Secrets, Self Concept)

Createspace, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.Self Esteem for Women 10 Principles for building self confidence and how to be happy in life (free living, happy...



Zip and Zap Meet the Sam: Yellow B/1c

Pearson Education Limited. Paperback. Book Condition: new. BRAND NEW, Zip and Zap Meet the Sam: Yellow B/1c, Sheryl Webster, This title is part of Pearson's Bug Club - the first whole-school reading programme that joins books and an online reading world to...