## International Conference on the Frontiers in Atomic, Molecular, and Optical Physics (AMO 2016)

Journal of Physics: Conference Series Volume 752

Shanghai, China 23 – 26 May 2016

ISBN: 978-1-5108-3061-5

ISSN: 1742-6588

## Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Institute of Physics All rights reserved. The material featured in this book is subject to IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the Institute of Physics at the address below.

Institute of Physics Dirac House, Temple Back Bristol BS1 6BE UK

Phone: 44 1 17 929 7481 Fax: 44 1 17 920 0979

techtracking@iop.org

## Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

## TABLE OF CONTENTS

EFFICIENT CREATION OF DIPOLAR COUPLED NITROGEN-VACANCY SPIN QUBITS IN	
DIAMOND	1
I Jakobi, S A Momenzadeh, F Favaro De Oliveira, J Michl, F Ziem, M Schreck, P Neumann, A Denisenko, J Wrachtrup	
MULTIPLE PERIOD STATES OF THE SUPERFLUID FERMI GAS IN AN OPTICAL LATTICE	13
Gentaro Watanabe, Sukjin Yoon, Franco Dalfovo, Takashi Nakatsukasa	
COHERENCE TRADE-OFF RELATIONS IN MULTIPARTITE SYSTEMS	19
Chandrashekar Radhakrishnan, Manikandan Parthasarathy, Segar Jambulingam, Tim Byrnes	
STIRAP SCHEMES FOR ATOMIC BOSE-EINSTEIN CONDENSATES	24
Andreas M. D. Thomasen, Tim Byrnes	
PLASMONIC SOLITONS AND DROMIONS VIA PLASMON-INDUCED TRANSPARENCY	34
Zhengyang Bai, Guoxiang Huang	
APPLICATION OF QUANTUM CONTROL TECHNIQUES TO DESIGN BROADBAND AND	
ULTRA-BROADBAND HALF-WAVE PLATES	47
Wei Huang, Elica Kyoseva	
BASIS ENTROPY: A USEFUL PHYSICAL QUANTITY ABOUT PROJECTIVE MEASUREMENT	53
Xing Chen	