



Yoshihisa Yamamoto

Professor of Electrical Engineering and of Applied Physics, Emeritus

CONTACT INFORMATION

- **Administrator**

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Bio

BIO

Yamamoto's current research interests are in the areas of quantum information, quantum optics, and mesoscopic physics such as squeezed states, quantum nondemolition measurements, cavity quantum electrodynamics, quantum computers, and mesoscopic electron transport and tunneling.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Electrical Engineering

ADMINISTRATIVE APPOINTMENTS

- Program Manager, Impulsing Paradigm Change through Disruptive Technologies (ImPACT) Program, Japan, (2014- present)
- Principal Investigator, Funding Program for World-Leading Innovative R&D on Science and Technology (First Program), (2011-2014)
- Professor, University of Tokyo, Japan, (2003-2014)
- Professor, National Institute of Informatics, (2003-2014)
- Honorary Professor, Chiao Tung University, Taiwan, (2001- present)
- Fellow, NTT R & D, (1999- present)
- Executive Research Scientist, NTT Basic Research Laboratories, Japan, (1997-1999)
- Distinguished Technical Member, NTT Basic Research Laboratories, Japan, (1994-1997)
- Professor, Applied Physics and Electrical Engineering Stanford University, USA, (1992- present)
- Senior Research Scientist, Supervisor, NTT Basic Research Laboratories, Japan, (1992-1994)
- Guest Professor, Tianjin and Fudan Universities, China, (1992-1992)
- Professor, Stanford University, USA, (1991-1991)
- Visiting Scientist, AT&T Bell Laboratories, USA, (1989-1989)
- Leader, Yamamoto Research Group, NTT Basic Research Laboratories, Japan, (1987-1992)
- Visiting Scientist, Royal Institute of Technology, Sweden, (1985-1985)
- Visiting Scientist, Massachusetts Institute of Technology, USA, (1982-1983)

- Scientist, NTT Basic Research Laboratories, Japan, (1978-1987)

HONORS AND AWARDS

- The Okawa Prize, The Okawa Foundation for Information and Telecommunications (2011)
- Hermann Anton Haus Lecturer, MIT (2010)
- Fellowship, American Physical Society (2007)
- Fellowship, Japan Society of Applied Physics (2007)
- Shida Rinzaburo Prize, Japan's Ministry of Internal Affairs and Communications (2006)
- Commentary Paper Award, Japan Society of Applied Physics (2005)
- Medal with Purple Ribbon, Emperor of Japan (2005)
- The Fourth Electronics Society Award, Institute of Electronics, Communications and Information Engineers of Japan (2001)
- IEEE/LEOS Quantum Electronics Award, IEEE (2000)
- Matsuo Science Prize, Matsuo Academic Promotion Foundation (2000)
- Fellowship, Optical Society of America (1995)
- Research Commendation, Minister of Science and Technology Agency of Japan (1995)
- Carl Zeiss Research Award, Carl Zeiss Foundation (1992)
- NTT Basic Research Laboratories Director Award, NTT (1992)
- NTT Research and Development Award, NTT (1992)
- Nishina Memorial Prize, Physical Society of Japan (1992)
- NTT Basic Research Laboratories Director Award, NTT (1991)
- NTT Research and Development Award, NTT (1987)
- The Achievement Award of the IECE of Japan, IECE (1985)
- The Young Engineer Award of the IECE of Japan, IECE (1982)

PROFESSIONAL EDUCATION

- PhD, University of Tokyo , Electrical Engineering (1978)
- MS, Tokyo Institute of Technology , Electrical Engineering (1975)
- BE, Tokyo Institute of Technology , Electrical engineering (1973)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Experimental Quantum Optics, Semiconductor Physics, Quantum Information

Publications

PUBLICATIONS

- **Universal logic gates for quantum-dot electron-spin qubits using trapped quantum-well exciton polaritons** *PHYSICAL REVIEW B*
Puri, S., McMahon, P. L., Yamamoto, Y.
2017; 95 (12)
- **Combinatorial optimization using dynamical phase transitions in driven-dissipative systems** *PHYSICAL REVIEW E*
Leleu, T., Yamamoto, Y., Utsunomiya, S., Aihara, K.
2017; 95 (2)

- **Exciton-polariton trapping and potential landscape engineering** *REPORTS ON PROGRESS IN PHYSICS*
Schneider, C., Winkler, K., Fraser, M. D., Kamp, M., Yamamoto, Y., Ostrovskaya, E. A., Hoeffling, S.
2017; 80 (1)
- **Ultrafast coherent manipulation of trions in site-controlled nanowire quantum dots** *OPTICA*
Lagoudakis, K. G., McMahon, P. L., Dory, C., Fischer, K. A., Mueller, K., Borish, V., Dalacu, D., Poole, P. J., Reimer, M. E., Zwiller, V., Yamamoto, Y., Vuckovic, J.
2016; 3 (12): 1430-1435
- **Reduced models and design principles for half-harmonic generation in synchronously pumped optical parametric oscillators** *PHYSICAL REVIEW A*
Hamerly, R., Marandi, A., Jankowski, M., Fejer, M. M., Yamamoto, Y., Mabuchi, H.
2016; 94 (6)
- **A fully programmable 100-spin coherent Ising machine with all-to-all connections.** *Science*
McMahon, P. L., Marandi, A., Haribara, Y., Hamerly, R., Langrock, C., Tamate, S., Inagaki, T., Takesue, H., Utsunomiya, S., Aihara, K., Byer, R. L., Fejer, M. M., Mabuchi, et al
2016; 354 (6312): 614-617
- **Topological defect formation in 1D and 2D spin chains realized by network of optical parametric oscillators** *INTERNATIONAL JOURNAL OF MODERN PHYSICS B*
Hamerly, R., Inaba, K., Inagaki, T., Takesue, H., Yamamoto, Y., Mabuchi, H.
2016; 30 (25)
- **Boltzmann Sampling by Degenerate Optical Parametric Oscillator Network for Structure-Based Virtual Screening** *ENTROPY*
Sakaguchi, H., Ogata, K., Isomura, T., Utsunomiya, S., Yamamoto, Y., Aihara, K.
2016; 18 (10)
- **Physics and applications of exciton-polariton lasers** *NATURE MATERIALS*
Fraser, M. D., Hoeffling, S., Yamamoto, Y.
2016; 15 (10): 1049-1052
- **A 16-bit Coherent Ising Machine for One-Dimensional Ring and Cubic Graph Problems** *SCIENTIFIC REPORTS*
Takata, K., Marandi, A., Hamerly, R., Haribara, Y., Maruo, D., Tamate, S., Sakaguchi, H., Utsunomiya, S., Yamamoto, Y.
2016; 6
- **Truncated Wigner theory of coherent Ising machines based on degenerate optical parametric oscillator network** *PHYSICA SCRIPTA*
Maruo, D., Utsunomiya, S., Yamamoto, Y.
2016; 91 (8)
- **Large-scale Ising spin network based on degenerate optical parametric oscillators** *NATURE PHOTONICS*
Inagaki, T., Inaba, K., Hamerly, R., Inoue, K., Yamamoto, Y., Takesue, H.
2016; 10 (6): 415-?
- **Initialization of a spin qubit in a site-controlled nanowire quantum dot** *NEW JOURNAL OF PHYSICS*
Lagoudakis, K. G., McMahon, P. L., Fischer, K. A., Puri, S., Mueller, K., Dalacu, D., Poole, P. J., Reimer, M. E., Zwiller, V., Yamamoto, Y., Vuckovic, J.
2016; 18
- **Spatial correlation of two-dimensional bosonic multimode condensates** *PHYSICAL REVIEW A*
Nitsche, W. H., Kim, N. Y., Roumpos, G., Schneider, C., Hoeffling, S., Forchel, A., Yamamoto, Y.
2016; 93 (5)
- **High-energy side-peak emission of exciton-polariton condensates in high density regime** *SCIENTIFIC REPORTS*
Horikiri, T., Yamaguchi, M., Kamide, K., Matsuo, Y., Byrnes, T., Ishida, N., Loeffler, A., Hoeffling, S., Shikano, Y., Ogawa, T., Forchel, A., Yamamoto, Y.
2016; 6
- **Computational Principle and Performance Evaluation of Coherent Ising Machine Based on Degenerate Optical Parametric Oscillator Network** *ENTROPY*
Haribara, Y., Utsunomiya, S., Yamamoto, Y.
2016; 18 (4)

- **Crossover from polariton lasing to exciton lasing in a strongly coupled ZnO microcavity.** *Scientific reports*
Lai, Y., Chou, Y., Lan, Y., Lu, T., Wang, S., Yamamoto, Y.
2016; 6: 20581-?
- **Two-photon interference at telecom wavelengths for time-bin-encoded single photons from quantum-dot spin qubits** *NATURE COMMUNICATIONS*
Yu, L., Natarajan, C. M., Horikiri, T., Langrock, C., Pelc, J. S., Tanner, M. G., Abe, E., Maier, S., Schneider, C., Hoefling, S., Kamp, M., Hadfield, R. H., Fejer, et al
2015; 6
- **Observation of non-Hermitian degeneracies in a chaotic exciton-polariton billiard** *NATURE*
Gao, T., Estrecho, E., Bliokh, K. Y., Liew, T. C., Fraser, M. D., Brodbeck, S., Kamp, M., Schneider, C., Hoefling, S., Yamamoto, Y., Nori, F., Kivshar, Y. S., Truscott, et al
2015; 526 (7574): 554-U203
- **Quantum correlation in degenerate optical parametric oscillators with mutual injections** *PHYSICAL REVIEW A*
Takata, K., Marandi, A., Yamamoto, Y.
2015; 92 (4)
- **Spatial and temporal dynamics of the crossover from exciton-polariton condensation to photon lasing** *JAPANESE JOURNAL OF APPLIED PHYSICS*
Matsuo, Y., Fraser, M. D., Kusudo, K., Loeffler, A., Hoefling, S., Forchel, A., Yamamoto, Y.
2015; 54 (9)
- **Radiative properties of multicarrier bound excitons in GaAs** *PHYSICAL REVIEW B*
Karin, T., Barbour, R. J., Santori, C., Yamamoto, Y., Hirayama, Y., Fu, K. C.
2015; 91 (16)
- **Generating functional approach for spontaneous coherence in semiconductor electron-hole-photon systems** *PHYSICAL REVIEW B*
Yamaguchi, M., Nii, R., Kamide, K., Ogawa, T., Yamamoto, Y.
2015; 91 (11)
- **Binary phase oscillation of two mutually coupled semiconductor lasers** *OPTICS EXPRESS*
Utsunomiya, S., Namekata, N., Takata, K., Akamatsu, D., Inoue, S., Yamamoto, Y.
2015; 23 (5): 6029-6040
- **Verification of very strong coupling in a semiconductor optical microcavity** *NEW JOURNAL OF PHYSICS*
Yang, M., Kim, N. Y., Yamamoto, Y., Na, N.
2015; 17
- **Photoluminescence of high-density exciton-polariton condensates** *PHYSICAL REVIEW B*
Ishida, N., Byrnes, T., Horikiri, T., Nori, F., Yamamoto, Y.
2014; 90 (24)
- **Network of time-multiplexed optical parametric oscillators as a coherent Ising machine** *NATURE PHOTONICS*
Marandi, A., Wang, Z., Takata, K., Byer, R. L., Yamamoto, Y.
2014; 8 (12): 937-942
- **Algebraic order and the Berezinskii-Kosterlitz-Thouless transition in an exciton-polariton gas** *PHYSICAL REVIEW B*
Nitsche, W. H., Kim, N. Y., Roumpos, G., Schneider, C., Kamp, M., Hofling, S., Forchel, A., Yamamoto, Y.
2014; 90 (20)
- **Exciton-polariton condensates** *NATURE PHYSICS*
Byrnes, T., Kim, N. Y., Yamamoto, Y.
2014; 10 (11): 803-813
- **Single-shot quantum nondemolition measurement of a quantum-dot electron spin using cavity exciton-polaritons** *PHYSICAL REVIEW B*
Puri, S., McMahan, P. L., Yamamoto, Y.
2014; 90 (15)

- **Effective interaction and condensation of dipolaritons in coupled quantum wells** *PHYSICAL REVIEW B*
Byrnes, T., Kolmakov, G. V., Kezerashvili, R. Y., Yamamoto, Y.
2014; 90 (12)
- **Fermionic Physics in Dipolariton Condensates** *PHYSICAL REVIEW LETTERS*
Su, J., Kim, N. Y., Yamamoto, Y., MacDonald, A. H.
2014; 112 (11)
- **Data search by a coherent Ising machine based on an injection-locked laser network with gradual pumping or coupling** *PHYSICAL REVIEW A*
Takata, K., Yamamoto, Y.
2014; 89 (3)
- **BioHackathon series in 2011 and 2012: penetration of ontology and linked data in life science domains** *JOURNAL OF BIOMEDICAL SEMANTICS*
Katayama, T., Wilkinson, M. D., Aoki-Kinoshita, K. F., Kawashima, S., Yamamoto, Y., Yamaguchi, A., Okamoto, S., Kawano, S., Kim, J., Wang, Y., Wu, H., Kano, Y., Ono, et al
2014; 5
- **Exciton-polariton laser diodes** *Conference on Nanophotonics and Micro/Nano Optics II*
Amthor, M., Fischer, J., Savenko, I. G., Shelykh, I. A., Chernenko, A., Rahimi-Iman, A., Kulakovskii, V. D., Reitzenstein, S., Kim, N. Y., Durnev, M., Kavokin, A. V., Yamamoto, Y., Forchel, et al
SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Co-variation of Depressive Mood and Spontaneous Physical Activity Evaluated by Ecological Momentary Assessment in Major Depressive Disorder** *36th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society (EMBC)*
Kim, J., Nakamura, T., Kikuchi, H., Yoshiuchi, K., Yamamoto, Y.
IEEE.2014: 6635–6638
- **Coherent Ising machine based on degenerate optical parametric oscillators** *PHYSICAL REVIEW A*
Wang, Z., Marandi, A., Wen, K., Byer, R. L., Yamamoto, Y.
2013; 88 (6)
- **Ultrafast optical control of individual quantum dot spin qubits.** *Reports on progress in physics. Physical Society (Great Britain)*
Greve, K. D., Press, D., McMahon, P. L., Yamamoto, Y.
2013; 76 (9): 092501-?
- **Neural networks using two-component Bose-Einstein condensates** *SCIENTIFIC REPORTS*
Byrnes, T., Koyama, S., Yan, K., Yamamoto, Y.
2013; 3
- **Temperature Dependence of Highly Excited Exciton Polaritons in Semiconductor Microcavities** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
Horikiri, T., Matsuo, Y., Shikano, Y., Loeffler, A., Hoefling, S., Forchel, A., Yamamoto, Y.
2013; 82 (8)
- **Complete tomography of a high-fidelity solid-state entangled spin-photon qubit pair.** *Nature communications*
De Greve, K., McMahon, P. L., Yu, L., Pelc, J. S., Jones, C., Natarajan, C. M., Kim, N. Y., Abe, E., Maier, S., Schneider, C., Kamp, M., Höfiling, S., Hadfield, et al
2013; 4: 2228-?
- **Second Thresholds in BEC-BCS-Laser Crossover of Exciton-Polariton Systems** *PHYSICAL REVIEW LETTERS*
Yamaguchi, M., Kamide, K., Nii, R., Ogawa, T., Yamamoto, Y.
2013; 111 (2)
- **Faster quantum chemistry simulation on fault-tolerant quantum computers** *NEW JOURNAL OF PHYSICS*
Jones, N. C., Whitfield, J. D., McMahon, P. L., Yung, M., Van Meter, R., Aspuru-Guzik, A., Yamamoto, Y.
2012; 14
- **Quantum-dot spin-photon entanglement via frequency downconversion to telecom wavelength** *NATURE*

- De Greve, K., Yu, L., McMahon, P. L., Pelc, J. S., Natarajan, C. M., Kim, N. Y., Abe, E., Maier, S., Schneider, C., Kamp, M., Hoefling, S., Hadfield, R. H., Forchel, et al
2012; 491 (7424): 421-?
- **Quantum Computing vs. Coherent Computing** *NEW GENERATION COMPUTING*
Yamamoto, Y., Takata, K., Utsunomiya, S.
2012; 30 (4): 327-355
 - **Entangling Single Photons from Independently Tuned Semiconductor Nanoemitters** *NANO LETTERS*
Sanaka, K., Pawlis, A., Ladd, T. D., Sleiter, L. J., Lischka, K., Yamamoto, Y.
2012; 12 (9): 4611-4616
 - **Layered Architecture for Quantum Computing** *PHYSICAL REVIEW X*
Jones, N. C., Van Meter, R., Fowler, A. G., McMahon, P. L., Kim, J., Ladd, T. D., Yamamoto, Y.
2012; 2 (3)
 - **Two-qubit geometric phase gate for quantum dot spins using cavity polariton resonance** *PHYSICAL REVIEW B*
Puri, S., Kim, N. Y., Yamamoto, Y.
2012; 85 (24)
 - **Exciton-polariton condensates with flat bands in a two-dimensional kagome lattice** *NEW JOURNAL OF PHYSICS*
Masumoto, N., Kim, N. Y., Byrnes, T., Kusudo, K., Loeffler, A., Hoefling, S., Forchel, A., Yamamoto, Y.
2012; 14
 - **BEC-BCS-laser crossover in Coulomb-correlated electron-hole-photon systems** *NEW JOURNAL OF PHYSICS*
Yamaguchi, M., Kamide, K., Ogawa, T., Yamamoto, Y.
2012; 14
 - **Macroscopic quantum computation using Bose-Einstein condensates** *PHYSICAL REVIEW A*
Byrnes, T., Wen, K., Yamamoto, Y.
2012; 85 (4)
 - **Power-law decay of the spatial correlation function in exciton-polariton condensates** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Roumpos, G., Lohse, M., Nitsche, W. H., Keeling, J., Szymanska, M. H., Littlewood, P. B., Loeffler, A., Hoefling, S., Worschech, L., Forchel, A., Yamamoto, Y.
2012; 109 (17): 6467-6472
 - **Spin dephasing of fluorine-bound electrons in ZnSe** *PHYSICAL REVIEW B*
Greilich, A., Pawlis, A., Liu, F., Yugov, O. A., Yakovlev, D. R., Lischka, K., Yamamoto, Y., Bayer, M.
2012; 85 (12)
 - **Negative Bogoliubov dispersion in exciton-polariton condensates** *PHYSICAL REVIEW B*
Byrnes, T., Horikiri, T., Ishida, N., Fraser, M., Yamamoto, Y.
2012; 85 (7)
 - **Cascaded frequency upconversion for high-speed single-photon detection at 1550 nm** *OPTICS LETTERS*
Pelc, J. S., Zhang, Q., Phillips, C. R., Yu, L., Yamamoto, Y., Fejer, M. M.
2012; 37 (4): 476-478
 - **Semiconductor qubits based on fluorine implanted ZnMgSe/ZnSe quantum-well nanostructures** *PHYSICAL REVIEW B*
Kim, Y. M., Sleiter, D., Sanaka, K., Yamamoto, Y., Meijer, J., Lischka, K., Pawlis, A.
2012; 85 (8)
 - **Transient time of an Ising machine based on injection-locked laser network** *NEW JOURNAL OF PHYSICS*
Takata, K., Utsunomiya, S., Yamamoto, Y.
2012; 14
 - **Phase-coherent high-orbital microcavity exciton-polaritons in a lattice** *Conference on Lasers and Electro-Optics (CLEO)*
Kim, N. Y., Kusudo, K., Hoefling, S., Forchel, A., Yamamoto, Y.
IEEE.2012

- **GaN-based microcavity polariton light emitting diodes** *Conference on Light-Emitting Diodes - Materials, Devices, and Applications for Solid State Lighting XVI*
Lu, T., Lai, Y., Huang, S., Chen, J., Wu, Y., Lin, S., Wang, S., Yamamoto, Y.
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **REMOVAL PROPERTIES OF REACTION SINTERED SiC IN ATMOSPHERIC PRESSURE PLASMA FABRICATION PROCESS** *10th International Conference on Progress of Machining Technology (ICPMT2012)*
Yamamura, K., Yamamoto, Y., Hata, Y., Deng, H.
JAPAN SOC PRECISION ENGINEERING-JSPE.2012: 203–206
- **Fault-tolerant quantum repeaters for long-distance quantum communication based on quantum dots** *Conference on Lasers and Electro-Optics (CLEO)*
Jones, N. C., De Greve, K., Yamamoto, Y.
IEEE.2012
- **Preliminary Study on Chemical Figuring and Finishing of Sintered SiC Substrate Using Atmospheric Pressure Plasma** *45th CIRP Conference on Manufacturing Systems (CIRP CMS)*
Yamamura, K., Yamamoto, Y., Deng, H.
ELSEVIER SCIENCE BV.2012: 335–339
- **High-Speed Single-Photon Detection at 1550 nm via Cascaded Frequency Upconversion** *Conference on Lasers and Electro-Optics (CLEO)*
Pelc, J. S., Zhang, Q., Phillips, C. R., Yu, L., Yamamoto, Y., Fejer, M. M.
IEEE.2012
- **Direct photoluminescence observation of the negative Bogoliubov branch in an exciton-polariton condensate** *Conference on Lasers and Electro-Optics (CLEO)*
Horikiri, T., Byrnes, T., Ishida, N., Loeffler, A., Hoefling, S., Forchel, A., Yamamoto, Y.
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- **Optical properties of fluorine implanted ZnMgSe/ZnSe quantum-well nanostructures** *Conference on Advances in Photonics of Quantum Computing, Memory, and Communication V*
Kim, Y. M., Sleiter, D., Sanaka, K., Yamamoto, Y., Meijer, J., Lischka, K., Pawlis, A.
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Simple quantum logic gate with quantum dot cavity QED systems** *PHYSICAL REVIEW B*
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2011; 84 (23)
- **Accelerated optimization problem search using Bose-Einstein condensation** *NEW JOURNAL OF PHYSICS*
Byrnes, T., Yan, K., Yamamoto, Y.
2011; 13
- **Ultrafast coherent control and suppressed nuclear feedback of a single quantum dot hole qubit** *NATURE PHYSICS*
De Greve, K., McMahon, P. L., Press, D., Ladd, T. D., Bisping, D., Schneider, C., Kamp, M., Worschech, L., Hoefling, S., Forchel, A., Yamamoto, Y.
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- **Present Status and Future Prospects of Quantum Information Processing: With Special Focus on Optically Controlled Semiconductor Spins and Single-Photon Technologies** *JAPANESE JOURNAL OF APPLIED PHYSICS*
Yamamoto, Y.
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- **Mapping of Ising models onto injection-locked laser systems** *OPTICS EXPRESS*
Utsunomiya, S., Takata, K., Yamamoto, Y.
2011; 19 (19): 18091-18108
- **Dynamical d-wave condensation of exciton-polaritons in a two-dimensional square-lattice potential** *NATURE PHYSICS*
Kim, N. Y., Kusudo, K., Wu, C., Masumoto, N., Loeffler, A., Hoefling, S., Kumada, N., Worschech, L., Forchel, A., Yamamoto, Y.
2011; 7 (9): 681-686
- **Possible origin of the nonmonotonic doping dependence of the in-plane resistivity anisotropy of Ba(Fe_{1-x}T_x)₂As₂ (T = Co, Ni and Cu)** *PHYSICAL REVIEW B*

- Kuo, H., Chu, J., Riggs, S. C., Yu, L., McMahon, P. L., De Greve, K., Yamamoto, Y., Analytis, J. G., Fisher, I. R.
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- **Room Temperature Current Injection Polariton Light Emitting Diode with a Hybrid Microcavity** *NANO LETTERS*
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2011; 11 (7): 2791-2795
 - **Resource analysis for quantum simulation on a fault-tolerant quantum computer** *241st National Meeting and Exposition of the American-Chemical-Society (ACS)*
Jones, N. C., McMahon, P. L., Whitfield, J., Yung, M., Aspuru-Guzik, A., Yamamoto, Y.
AMER CHEMICAL SOC.2011
 - **Single vortex-antivortex pair in an exciton-polariton condensate** *NATURE PHYSICS*
Roumpos, G., Fraser, M. D., Loeffler, A., Hoefling, S., Forchel, A., Yamamoto, Y.
2011; 7 (2): 129-133
 - **Inhibition of Allergic Bronchial Asthma by Thrombomodulin Is Mediated by Dendritic Cells** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*
Takagi, T., Taguchi, O., Toda, M., Ruiz, D. B., Bernabe, P. G., D'Alessandro-Gabazza, C. N., Miyake, Y., Kobayashi, T., Aoki, S., Chiba, F., Yano, Y., Conway, E. M., Munesue, et al
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 - **Nuclear Feedback in a Single Electron-Charged Quantum Dot under Pulsed Optical Control** *Conference on Advances in Photonics of Quantum Computing, Memory, and Communication IV*
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 - **Photon antibunching and magnetospectroscopy of a single fluorine donor in ZnSe** *APPLIED PHYSICS LETTERS*
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2010; 97 (24)
 - **Massive parallel generation of indistinguishable single photons via the polaritonic superfluid to Mott-insulator quantum phase transition** *NEW JOURNAL OF PHYSICS*
Na, N., Yamamoto, Y.
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 - **BCS Wave-Function Approach to the BEC-BCS Crossover of Exciton-Polariton Condensates** *PHYSICAL REVIEW LETTERS*
Byrnes, T., Horikiri, T., Ishida, N., Yamamoto, Y.
2010; 105 (18)
 - **Quantum Hall charge sensor for single-donor nuclear spin detection in silicon** *NEW JOURNAL OF PHYSICS*
Sleiter, D., Kim, N. Y., Nozawa, K., Ladd, T. D., Thewalt, M. L., Yamamoto, Y.
2010; 12
 - **Pulsed Nuclear Pumping and Spin Diffusion in a Single Charged Quantum Dot** *PHYSICAL REVIEW LETTERS*
Ladd, T. D., Press, D., De Greve, K., McMahon, P. L., Friess, B., Schneider, C., Kamp, M., Hoefling, S., Forchel, A., Yamamoto, Y.
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 - **In-plane electronic anisotropy in underdoped Ba(Fe_{1-x}Cox)₂As₂ revealed by partial detwinning in a magnetic field** *PHYSICAL REVIEW B*
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 - **Ultrafast optical spin echo in a single quantum dot** *NATURE PHOTONICS*
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2010; 4 (6): 367-370
 - **Fluorine-doped ZnSe for applications in quantum information processing** *PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS*

- Ladd, T. D., Sanaka, K., Yamamoto, Y., Pawlis, A., Lischka, K.
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- **Hong-Ou-Mandel Dip Using Degenerate Photon Pairs from a Single Periodically Poled Lithium Niobate Waveguide with Integrated Mode Demultiplexer** *JAPANESE JOURNAL OF APPLIED PHYSICS*
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 - **Exciton-polariton Bose-Einstein condensation** *REVIEWS OF MODERN PHYSICS*
Deng, H., Haug, H., Yamamoto, Y.
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