

PUBLICATIONS LIST

Dr. Symeon Tsintzos

- *Journal peer-reviewed publications*

1. **Polariton condensate trapping by parametric pair scattering**, G.G. Paschos, A.Tzimis, S. I. Tsintzos, P.G. Savvidis, Journal of Physics: CM 32, 36LT02 (2020)
2. **Polariton Bose condensation in microcavity in high magnetic fields**, VP Kochereshko, A. V. Platonov, N. G. Filosov, P. Savvidis, S. I Tsintzos, A. Hatzopoulos, L. Besombes, H. Mariette. Journal of Physics: CS 1400, 066007 (2019)
3. **Electrical tuning of nonlinearities in exciton-polariton condensates**, S.I. Tsintzos, A. Tzimis, G. Stavrinidis, A. Trifonov, Z. Hatzopoulos, J.J. Baumberg, H. Ohadi, and P.G. Savvidis, Phys. Rev. Let. 121, 037401 (2018).
4. **Stochastic spin flips in polariton condensates: nonlinear tuning from GHz to sub-Hz**, Yago del Valle-Inclan Redondo, Hamid Ohadi, Yuri G Rubo, Orr Beer, Andrew J Ramsay, Symeon I Tsintzos, Zacharias Hatzopoulos, Pavlos G Savvidis, Jeremy J Baumberg, New J. Phys. 20,075008 (2018).
5. **Strain-assisted optomechanical coupling of polariton condensate spin to a micromechanical resonator**, O. Be'er, H. Ohadi, Y. del Valle-Inclan Redondo, A. J. Ramsay, S. I. Tsintzos, Z. Hatzopoulos, P. G. Savvidis, and J. J. Baumberg, APL 111, 261104, (2017).
6. **Hybrid organic-inorganic polariton laser**, G. G. Paschos, N. Somaschi, S. I. Tsintzos, D. Coles, J. L. Bricks, Z. Hatzopoulos, D. G. Lidzey, P. G. Lagoudakis & P. G. Savvidis, Scientific Reports 7, 11377 (2017)
7. **Spin Order and Phase Transitions in Chains of Polariton Condensates**, H. Ohadi, A. J. Ramsay, H. Sigurdsson, Y. del Valle-Inclan Redondo, S. I. Tsintzos, Z. Hatzopoulos, T. C. H. Liew, I. A. Shelykh, Y. G. Rubo, P. G. Savvidis and J. J. Baumberg. PRL 119, 067401 (2017)
8. **Inverse-phase Rabi oscillations in semiconductor microcavities**, AV Trifonov, NE Kopteva, MV Durnev, I. Ya. Gerlovin, RV Cherbunin, A Tzimis, S.I. Tsintzos, Z Hatzopoulos, PG Savvidis and AV Kavokin, Phys. Rev B **95**, 155304 (2017)
9. **An attojoule electrical spin-switch based on optically trapped polariton condensates**. A Dreismann, H Ohadi, Y.V.I. Redondo, R. Balili, Y Rubo, S.I. Tsintzos, G. Deligeorgis, Z. Hatzopoulos, P.G. Savvidis, J.J. Baumberg, Nature Materials 15, 1074 (2016)
10. **Enhanced Stark Tuning of Single InAs (211)B Quantum Dots due to Nonlinear Piezoelectric Effect in Zincblende Nanostructures**, S. Germanis, C. Katsidis, S. I. Tsintzos, A. Stavrinidis, G. Konstantinidis, N. Florini, J. Kioseoglou, G.P. Dimitrakopoulos, Th. Kehagias, Z. Hatzopoulos, and N.T. Pelekanos, Phys. Rev. Applied 6, 014004, 2016
11. **Tunable magnetic alignment between trapped exciton-polariton condensates**, H. Ohadi, Y.V. Redondo, A. Dreismann, Y.G. Rubo, F. Pinsker, S. I. Tsintzos, Z. Hatzopoulos, P.G. Savvidis, J.J. Baumberg, Phys. Rev. Lett. 116, 106403 (2016)
12. **Lasing in Bose-Fermi mixtures**. V. Kochereshko, M. Durnev, L. Besombes, H. Mariette, V. Sapega, A Askitopoulos, I Savenko, TC Liew, I Shelykh, A Platonov, S.

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- 13. Dynamics of the Energy Relaxation in a Parabolic Quantum Well Laser**, A. V. Trifonov, E. D. Cherotchenko, J. L. Carthy, I. V. Ignatiev, A. Tzimis, S. Tsintzos, Z. Hatzopoulos, P. G. Savvidis, A.V. Kavokin, Phys. Rev. B 93, 125304 (2016)
- 14. On the condensation of exciton polaritons in microcavities induced by a magnetic field**, KochereshkoVP, Avdoshina DV, Savvidis P, Tsintzos SI, Hatzopoulos Z, Kavokin AV, Besombet L, Mariette H, Semiconductor 50, 1506 (2016)
- 15. Strong coupling and stimulated emission in single parabolic quantum well micro cavity for terahertz cascade**, A. Tzimis, A. V. Trifonov, G. Christmann, S. I. Tsintzos, Z. Hatzopoulos, I. V. Ignatiev, A. V. Kavokin, P. G. Savvidis. Appl. Phys. Lett. 107, 101101 (2015)
- 16. Spontaneous spin bifurcations and ferromagnetic phase transitions in a spinorexciton-polariton condensate**, H. Ohadi, A. Dreismann, Y. G. Rubo, F. Pinsker, Y. del Valle-Inclan Redondo, S. I. Tsintzos, Z. Hatzopoulos, P. G. Savvidis, J. J. Baumberg. Phys. Rev. X 5, 031002 (2015).
- 17. Controllable structuring of exciton-polariton condensates in cylindrical pillar microcavities**. V.K. Kalevich, M.M. Afanasiev, V.A. Lukoshkin, D.D. Solnyshkov, G. Malpuech, K.V. Kavokin, S.I. Tsintzos, Z. Hatzopoulos, P.G. Savvidis and A.V. Kavokin Phys. Rev. B 91, 045305 (2015)
- 18. Relaxation oscillations in the formation of a polariton condensate**, Milena De Giorgi, Dario Ballarini, George Deligeorgis, Simos I. Tsintzos, Zacharias Hatzopoulos, Pavlos G. Savvidis, Giuseppe Gigli, Fabrice P. Laussy, Daniele Sanvitto, PRL 112, 113602 (2014)
- 19. Tuning the Energy of a Polariton Condensate via Bias-controlled Rabi Splitting**. P. Tsotsis, S. I. Tsintzos, G. Christmann, P.G. Lagoudakis, S. Kyrienko, I.A. Shelykh, J.J. Baumberg, A.V. Kavokin, Z. Hatzopoulos, P.S. Eldridge and P. G. Savvidis Phys. Rev. Applied 2, 014002 (2014)
- 20. Ring-shaped polariton lasing in pillar microcavities**, V. K. Kalevich, M. M. Afanasiev, V. A. Lukoshkin, K. V. Kavokin, S. I. Tsintzos, P. G. Savvidis, and A. V. Kavokin, Journal of Applied Physics 115, 094304 (2014)
- 21. Electrically controlled strong coupling and polariton bistability in double quantum wells**, C. Coulson, G. Christmann, P. Christofolini, C. Grossmann, JJ Baumberg, SI Tsintzos, G. Konstantinidis, Z. Hatzopoulos, PG Savvidis, Phys. Rev. B 87, 045311 (2013)
- 22. Coupling Quantum Tunneling with Cavity Photons**, P. Cristofolini, G. Christmann, S. I. Tsintzos, G. Deligeorgis, G. Konstantinidis, Z. Hatzopoulos, P.G. Savvidis and J.J. Baumberg, Science 336, 704 (2012)
- 23. Polariton Condensate Transistor Switch**, T.Gao, P.S. Eldridge, T.C.H. Liew, S.I. Tsintzos, G. Stavriniadis, G. Deligeorgis, Z. Hatzopoulos, and P.G. Savvidis, Phys. Rev. B 85, 235102 (2012)
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25. **Oriented polaritons in strongly-coupled asymmetric double quantum well microcavities**, G. Christmann, A. Askitopoulos, G. Deligeorgis, Z. Hatzopoulos, S.I Tsintzos, P.G Savvidis, J.J Baumberg. Appl. Phys. Lett. 98, 081111 (2011)
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 27. **Room temperature GaAs exciton-polariton light emitting diode**, S.I. Tsintzos, P. G. Savvidis, G. Deligeorgis, Z. Hatzopoulos, N. T. Pelekanos, Appl. Phys. Lett. 94, 071109 (2009), selected also to appear in the March 2, 2009 issue of the Virtual Journal of Nanoscale Science & Technology.
 28. **InAs nanostructures on polar GaAs surfaces**, G. E. Dialynas, A. Pantazis, Z. Hatzopoulos, M. Androulidaki, K. Tsagaraki, G. Konstantinidis, C. Xenogianni, E. Trichas, S. Tsintzos, P. G. Savvidis, N. T. Pelekanos, Int. Journal of Nanotechnology, special issue on Nanotechnology in Greece, IJNT 6, p.124-136 (2009)
 29. **A GaAs polariton light-emitting diode operating near room temperature**, S. Tsintzos, N. T. Pelekanos, G. Konstantinidis, Z. Hatzopoulos, P. G. Savvidis, Nature 453, 372 (2008).
 30. **Towards electrically-pumped microcavity polariton lasers**, S. Tsintzos, P. G. Savvidis, G. Konstantinidis, Z. Hatzopoulos, N. T. Pelekanos, phys. stat. sol. (c) 5, 3594 (2008).
 31. **Single dot spectroscopy on InAs/GaAs piezoelectric quantum dots**, G. E. Dialynas, N. Hadjidimitriou, S. Kalliakos, S. Tsintzos, P. G. Savvidis, Z. Hatzopoulos, N. T. Pelekanos, phys. stat. sol. (a) 205, 2566 (2008).
 32. **Anti-binding of bi-excitons in (211)B InAs/GaAs piezoelectric quantum dots**, G.E. Dialynas, C. Xenogianni, S. Tsintzos, E. Trichas, P.G. Savvidis, G. Konstantinidis, J. Renard, B. Gayral, Z. Hatzopoulos, N.T. Pelekanos, Physica E 40, 2113 (2008)
- **Books**
- B1. **“Electrically Driven Polariton Light Emitting Devices”**, Simeon I. Tsintzos, Nikolaos T. Pelekanos, Pavlos G. Savvidis, Book Chapter in **Exciton Polaritons in Microcavities**, Springer Series in Solid-State Sciences, Edited by Daniele Sanvitto and Vladislav Timofeev, Springer (2012)