

Interference effects with surface plasmons Kuzmin, N.V.

Citation

Kuzmin, N. V. (2008, January 10). *Interference effects with surface plasmons*. *Casimir PhD Series*. LION, Quantum Optics Group, Faculty of Science, Leiden University. Retrieved from https://hdl.handle.net/1887/12551

Version: Corrected Publisher's Version

Licence agreement concerning inclusion of doctoral

License: thesis in the Institutional Repository of the University

of Leiden

Downloaded from: https://hdl.handle.net/1887/12551

Note: To cite this publication please use the final published version (if applicable).

Curriculum Vitae

Nikolay Victorovich Kuzmin

Born on the 28th of January 1980 in the city of Troitsk, Moscow region, Russia, I completed my secondary education in 1997 (Troitsk lyceum) and entered the Physics Faculty of Moscow State University (MSU). After acquiring the bachelor degree, I entered the Optics and Spectroscopy department of the MSU and started my Master project on the optical properties of novel nonlinear crystals for the near infrared range. My Master research has been carried out at the Institute of Spectroscopy of the Russian Academy of Sciences (Troitsk) under supervision of Prof. E.A. Ryabov and Dr. V.B. Laptev.

Starting February 2003, I joined the Quantum Optics and Quantum Information Group at Leiden University (The Netherlands) for a PhD project directed by Prof. G.W.'t Hooft and Dr. E.R. Eliel. I presented some of the results of the project both at the annual conferences in Lunteren and Veldhoven (The Netherlands) and at the international conference in Graz ("Surface Plasmon Photonics 2", Austria, 2005) and Keene (Gordon Research Conference on Plasmonics, NH, USA, 2006). During my stay at Leiden University I taught the lab classes of the LabVIEW course for the second-year bachelor students.

Acknowledgements

At the end of my thesis I want to say a word of thanks to those who contributed to this work and to the nice people who were around during my long and amusing years in the Netherlands.

It has been a great pleasure to work in the Quantum Optics group and I want to express my deep gratitude to the people I've been working with: Guilhem, Anna, Jelmer, Sanli, Barry and Paul; and to the group members: Andrea, Cyriaque, Hayk, Jos, Sumant, Dirk, Javier, Jorrit, Erwin, Thijs, Peter, Graciana, Eduard, Steven, Bart-Jan, Wouter, Ljubisa, Michele and Jörg.

I'm very grateful to Dr. Paul Alkemade (Kavli Institute for Nanoscience, Delft) for helping me with sample production. I want to thank Arno van Amersfoort and René Overgauw for their excellent computer & electronic support and Koos Benning and Jos Disselhorst for high-end machining. I would like to commemorate Anneke Aschoff and I want to thank Daniëlle van Raaij and Henriette van Leeuwen for their help with various papers, forms and other types of bureaucracy.

I am deeply grateful to my parents and my family members for their love and support, and I want to thank my friends and neighbors for the chats and fun we had together.

Мне хотелось бы от всего сердца поблагодарить моих родителей и родных за любовь и моральную поддержку в течение всех моих лет в Голландии. Также, я хотел бы сказать спасибо и передать привет моим милым друзьям: Александру Русанову, Хайку Арутюняну, Михаилу и Елене Кольченко, Алексею Занину, Анне Чеботаревой и Михилу де Дооду, Ивану Комиссарову, Александре Кадет и Светлане Бугаевой, Катерине Орловой и Марии Переваловой, Катерине Кремлевой, Василию Сеню и Владиславу Коптелову, а так же Олесе Никольской.

List of publications

- V.V. Badikov, N.V. Kuzmin, V.B. Laptev, A.L. Malinovsky, K.V. Mitin, G.S. Nazarov, E.A. Ryabov, A.M. Seryogin and N.I. Schebetova, A study of the optical and thermal properties of nonlinear mercury thiogallate crystals, Quantum Electronics, **34**, p. 451 (2004).
- H.F. Schouten, N.V. Kuzmin, G. Dubois, T.D. Visser, G. Gbur, P.F.A. Alkemade, H. Blok, G.W. 't Hooft, D. Lenstra and E.R. Eliel, *Plasmonassisted two-slit transmission: Young's experiment revisited*, Phys. Rev. Lett., **94**, p. 053901 (2005).
- N.V. Kuzmin, H.F. Schouten, G. Gbur, G.W. 't Hooft, E.R. Eliel and T.D. Visser, *Enhancement of spatial coherence by surface plasmons*, Opt. Lett., **32**, p. 445 (2007).
- N.V. Kuzmin, P.F.A. Alkemade, G.W. 't Hooft and E.R. Eliel, *Bouncing surface plasmons*, Opt. Express **15**, p. 13757 (2007).
- N.V. Kuzmin, P.F.A. Alkemade, G.W. 't Hooft and E.R. Eliel, *Phase factors in light-plasmon scattering*, in preparation.
- N.V. Kuzmin, G.W. 't Hooft and E.R. Eliel, Sub-wavelength slit as a quarter-wave plate, in preparation.
- N.V. Kuzmin, O.T.A. Janssen, P.F.A. Alkemade, H.P. Urbach, G.W. 't Hooft and E.R. Eliel, *Retardation effects in sub-wavelength slits in thin metal films near cut-off*, in preparation.
- N.V. Kuzmin, A.L. Tchebotareva, J.J. Renema, B.J.G. van der Meer, P.F.A. Alkemade, G.W. 't Hooft and E.R. Eliel, Short-wavelength surface plasmons, in preparation.