Evgeniy Shkondin - DTU Orbit (08/11/2017)

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Plasmonics and Metamaterials

Publications:

**Advanced fabrication of hyperbolic metamaterials**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

**Highly ordered Al-doped ZnO nano-pillar and tube structures as hyperbolic metamaterials for mid-infrared plasmonics**
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

**Highly Ordered Transparent Conductive Oxide Nanopillar Metamaterials for Mid-Infrared Plasmonics**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

**Laguerre-Gauss beam generation in IR and UV by subwavelength surface-relief gratings**
Vertchenko, L., Shkondin, E., Malureanu, R. & Monken, C. H. 2017 In : Optics Express. 25, 6, p. 5917-5926
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Large-scale high aspect ratio Al-doped ZnO nanopillars arrays as anisotropic metamaterials.**
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Midinfrared Surface Waves on a High Aspect Ratio Nanotrench Platform**
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Surface passivation and carrier selectivity of the thermal-atomic-layer-deposited TiO2 on crystalline silicon**
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Conductive Oxides Trench Structures as Hyperbolic Metamaterials in Mid-infrared Range**
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

**Effective medium approximation for deeply subwavelength all-dielectric multilayers: when does it break down?**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

**Fabrication of Al-doped ZnO high aspect ratio nanowires and trenches as active components in mid-infrared plasmonics**
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016
Fabrication of deep-profile Al-doped ZnO one- and two-dimensional lattices as plasmonic elements
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Fabrication of high aspect ratio TiO2 and Al2O3 nanogratings by atomic layer deposition
Publication: Research - peer-review › Journal article – Annual report year: 2016

Fabrication of hollow coaxial ZnAl2O4 high aspect ratio freestanding nanopillars based on the Kirkendall effect
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Hyperbolic Metamaterials with Complex Geometry
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Surface waves on metal-dielectric metamaterials
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Surface Waves on Metamaterials Interfaces
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Deep subwavelength photonic multilayers fabricated by atomic layer deposition
Publication: Research - peer-review › Paper – Annual report year: 2015

Experimental Demonstration of Effective Medium Approximation Breakdown in Deeply Subwavelength All-Dielectric Multilayers
Publication: Research - peer-review › Journal article – Annual report year: 2015

Fabrication of TiO2 and Al2O3 High Aspect Ratio Nanostructured Gratings at Sub-Micrometer Scale
Publication: Research - peer-review › Paper – Annual report year: 2015

TiO2 and Al2O3 ALD Grown Multilayers for Subwavelength Photonics
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Ultra-thin Metal and Dielectric Layers for Nanophotonic Applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015
Depositing Materials on the Micro- and Nanoscale
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Projects:

Dark-field hyperlens: Superresolution imaging and label-free sensing device for biological applications
Lavrinenko, A., Novitsky, A., Takayama, O., Shkondin, E. & Repän, T.
01/06/2016 → 06/09/2019
Project

Fabrication of hyperbolic metamaterials using atomic layer deposition
Shkondin, E., Lavrinenko, A., Jensen, F., Hansen, O., Kovalgin, A. Y. & Strangi, G.
15/11/2013 → 08/03/2017
Project: PhD