Alex VOZNYY

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Canadian citizen

PROFESSIONAL EXPERIENCE

2011 – present — *Principal Scientist – Computational Materials Science*
University of Toronto, Canada
Quantum Dot Photovoltaics Group (Prof. Ted Sargent)

2008 – 2011 — *Research associate*
National Research Council of Canada, Ottawa
Quantum Theory Group (Prof. Pawel Hawrylak)

2005 – 2008 — *Postdoctoral fellow*
University of Sherbrooke, Quebec, Canada
Quantum Semiconductors and Laser Nanotechnology Group (Prof. Jan J.Dubowski)

EDUCATION

2001 – 2004 — **Ph. D.** in Semiconductor physics
Chernivtsi National University, Ukraine (Advisor: Prof. V. Deibuk)

2000 – 2001 — **M. Sc.** in Semiconductor microelectronics (with honors)

1996 – 2000 — **B. Sc.** in Semiconductor microelectronics (with honors)
Chernivtsi National University, Ukraine

TEACHING EXPERIENCE

2005-2007 — Graduate course "*Basic principles and applications of lasers*" (**teaching in French**)
Department of Electrical and Computer Engineering, University of Sherbrooke

2002, 2003 — Undergraduate course "*Theory of electrical and electronic circuits*", Department of semiconductor microelectronics, Chernivtsi National University, Ukraine

2010-2014 — Invited high-school Physics lectures

ACADEMIC AWARDS

- President of Ukraine Fellowship for Graduate Students, 2004
- Private Fund "Era" Fellowship for Undergraduate Scientists, 1998

SERVICE

- Reviewer for J. Am. Chem. Soc., Phys. Rev. Lett., Phys. Rev. B, J. Phys. Chem., Langmuir, PCCP, Chem. Comm., J. Mater. Chem., RSC Nanoscale.
- Conference organizing committee of Photonics West 2015 LASE.

AFFILIATIONS

American Chemical Society, American Physical Society.

RESEARCH INTERESTS

Computational physical chemistry, surface science and nanotechnology:

- **Electronic and optical properties of nanostructures**: semi-empirical atomistic methods, many-body problems, multi-exciton generation and Auger processes, TD-DFT excited states and dynamics, electron-phonon coupling.
- **Passivation of semiconductor surfaces and nanocrystals**: effect of surface ligands and surface reconstructions on electronic properties, nucleation and growth kinetics of nanocrystals, ultra-stable nanoparticles, reversible surface traps, blinking of quantum dots.
- **Self-assembled monolayers**: structural properties of SAMs on metal and semiconductor surfaces, formation kinetics, directed self-assembly.

RESEARCH EXPERIENCE

- Modeling semiconductor colloidal quantum dots
  - Ligands, surface traps, doping, nucleation and crystal growth (ab initio)
  - Optical properties of epitaxial and colloidal nanostructures (ab initio, semi-empirical)
  - Excitons and biexcitons coupling, dephasing, multi-exciton generation (density matrix, tight binding, configuration interaction, TD-DFT)
  - Microscopic dielectric screening (ab initio)
- Graphene and other 2D materials
  - Magnetization and degenerate electronic edge states; effect of flake shape, edge passivation and reconstructions (ab initio)
- Bulk photovoltaic materials
  - Lead halide perovskites, copper oxide, CuInGaSe (ab initio)
- Photocatalysis using semiconductor surfaces
  - TiO_2, NiFeCoOx, Ca-Mn complex, CdSe (ab initio)
- Lasing and light emission from semiconductor nanocrystals
- Self-assembled monolayers and surfaces
  - Formation and structure of thiol SAMs on GaAs and Au (QM/MM and ab initio)
  - Electronic passivating properties of thiols on GaAs surfaces (ab initio)
  - Functionalization of semiconductor surfaces for bio-detection (molecular mechanics)
- Carrier and heat transport
  - Laser-assisted quantum well intermixing: light absorption, heat propagation, defects diffusion and electronic energy states in quantum wells (finite elements method)
  - Charge carrier diffusion in quantum dot films (kinetic Monte Carlo, finite elements method)
- Experimental techniques
  - Photovoltaic device fabrication and testing
  - Characterization of the quantum dot films using XPS, RBS, SIMS, Raman, FTIR, time-resolved PL, scanning tunneling spectroscopy, synchrotron EXAFS
  - Theoretical simulation of XPS, XAS, FTIR, STM, TEM, and surface XRD data

REFERENCES

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Prof. Jan J. Dubowski
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PUBLICATIONS Oleksandr (Alex) Voznyy

h-index 23, >1700 citations

Publication highlights

- **O. Voznyy**, J. J. Dubowski, J. T. Yates Jr., P. Maksymovych,
  The role of gold adatoms and stereochemistry in self-assembly of methylthiolate on Au(111),
  J. Am. Chem. Soc., **2009**, 131, p.12989.
- **O. Voznyy**, E. H. Sargent,
  Atomistic model of fluorescence intermittency of colloidal quantum dots,
  Phys. Rev. Lett., **2014**, 112, 157401.
- D. Zhitomirsky*, **O. Voznyy***, S. Hoogland, K. Kemp, A. Ip, S. M.Thon, E. H. Sargent,
  Engineering colloidal quantum dot solids within and beyond the mobility-invariant regime,
  Nature Commun. **2014**, 5, 3803. **Contributed equally.*
- Z.Ning,* X.Gong,* R.Comin,* G.Walters, F.Fan, **O.Voznyy**, A.Buin, S.Hoogland, E.H.Sargent,
  Quantum-dot-in-perovskite solids,
  Nature **2015**, *DOI: 10.1038/nature14563*.
- Z. Ning, **O. Voznyy**, J. Pan, J. Xu, S. Hoogland, V. Adinolfi, K. Kemp, J. Minor, H. Dong, L. Rollny, A. Labelle, G. Carey, B. Sutherland, O. Bakr, E. H. Sargent,
  Air stable n-type colloidal quantum dot solids,
  Nature Mater. **2014**, 13, 822.
- **O. Voznyy**, D. Zhitomirsky, P. Stadler, Z. Ning, S. Hoogland, E. H. Sargent
  A charge-orbital balance picture of doping in colloidal quantum dot solids
  ACS Nano, **2012**, 6, 8448–8455.
- M. Yuan,* **O. Voznyy**,* D. Zhitomirsky, P.Kanjanaboos, E. H. Sargent,
  Synergistic doping of fullerene electron transport layer and colloidal quantum dot solids enhances solar cell performance,
  Adv. Mater. **2014**, 27, 917–921. **Contributed equally.*
- **O. Voznyy**, D. Guclu, P. Potasz, P. Hawrylak,
  Effect of edge reconstruction and passivation on zero-energy states and magnetism in triangular graphene quantum dots with zigzag edges,
  Phys. Rev. B, **2011**, 83, 165417.
- **O. Voznyy**,
  Mobile surface traps in CdSe nanocrystals with carboxylic acid ligands,
  J. Phys. Chem. C, **2011**, 115, p.15927.

Reviews

- **O. Voznyy**, D. Zhitomisrky, B. Sutherland, E. H. Sargent,
  Engineering excitons and free charges in solution-processed semiconductors,
  Submitted.
- J. Y. Kim, **O. Voznyy**, D. Zhitomirsky, E. H. Sargent,
  Colloidal quantum dot materials and devices: a quarter-century of advances,
  Adv. Mater., **2013**, 25, 4986–5010.

- P. Maksymovych, **O. Voznyy**, D. Dougherty, D. Sorescu, J. T. Yates Jr.
  Gold adatom as a key structural component in self-assembled monolayers of organosulfur molecules on Au(111),
  Prog. Surf. Sci., **2010**, 85, pp.206-240.
- W. Sheng, M. Korkusinski, A. D. Güçlü, M. Zielinski, P. Potasz, E. Kadantsev, **O. Voznyy**, P.Hawrylak,
  Electronic and optical properties of semiconductor and graphene quantum dots,
  Frontiers of Phys., **2012**, 7, 328-352.
- J. J. Dubowski, **O. Voznyy**, G. Marshall,
  Molecular self-assembly and passivation of GaAs (001) with alkanethiol monolayers: a view towards bio-functionalization,
  Appl. Surf. Sci., **2010**, 256, p.5714.

Other publications in chronological order

In preparation

- **O. Voznyy**, A. Kiani, D. Zhitomirsky, K. Kemp, F. Fan, E. H. Sargent,
  Temperature dependent recombination losses in solution processed photovoltaics,
  In preparation.
- **O. Voznyy**, J. Mokkath, U. Schwingenshlogl, E. H. Sargent,
  TDDFT study of optoelectronic properties of magic-size CdSe clusters with carboxyl ligands,
  In preparation.
- A. Kiani,* **O. Voznyy**,* L. Levina, R. Comin, E. H. Sargent,
  Self-healing of colloidal quantum dots using atoms with variable oxidation state,
  *In preparation. *Contributed equally.*
- C.-K. Kim, **O. Voznyy**, G. Marshall, N. Liu, X. Huang, J. J. Dubowski,
  Formation of highly-ordered COOH-terminated self-assembled monolayers of alkanethiolates on an electrically biased (001) GaAs substrate,
  In preparation.
- B. Zhang*, X. Zheng*, **O. Voznyy**, J. Xu, A. Vojvodic, N. Chen, J. Norskov, E. H. Sargent,
  Ternary alloy oxide catalyst for oxygen evolution reaction,
  In preparation.
- A. Buin, **O. Voznyy**, R. Comin, X. Gong, E. Beauregard, J.Xu, A. Ip, E. H. Sargent,
  Phase stability of mixed Br-I lead perovskites,
  In preparation.

Submitted

- **O. Voznyy**, L. Levina, F. Fan, A. Ip, A. Kiani, S. M. Thon, K.W. Kemp, E. H. Sargent,
  Surface induced finestructure reordering and Stokes shift in colloidal quantum dots,
  Submitted.
- X. Lan*, **O. Voznyy***, A.Kiani,* F.P.G. deArquer, A.Abbas, G.H.Kim, E. H. Sargent,
  High efficiency quantum dot solar cells via molecular halide passivation,
  *Submitted. *Contributed equally.*

- Z.Yang, **O.Voznyy**, M.Liu, M.Yuan, L.Levina, S.Hoogland, E.H. Sargent,
  Infrared quantum dot light-emitting diodes with PbS nanoparticle carrier transport layers,
  Submitted.
- X. Gong*, Z.Yang*, **O.Voznyy**, G.Walters, R. Comin, S. Hoogland, E.H.Sargent,
  Quantum-dot-in-perovskite light-emitting diodes,
  Submitted.
- M.Yuan*, L.Quan*, R.Comin*, **O.Voznyy**, A.Buin, A. Kirmani, K. Zhao, D. H. Kim, A. Amassian, E. H. Sargent,
  Surface layer protection enhances stability in reduced dimensionality perovskites,
  Submitted.
- H. F. Movahed, S. Hoogland, **O. Voznyy**, R. Wolowiec, J. McDowell, L. Levina, E. H. Sargent,
  Thermally stable colloidal quantum dot thermophotovoltaics,
  Submitted.
- L. Rollny, J. McDowell, **O. Voznyy**, J. A. Tang, E. H. Sargent,
  Colloidal stabilization by hydrogen-bonded ligand-pairs,
  Submitted.

2015

- M. Adachi, F. Fan, D. Sellan, S. Hoogland, **O. Voznyy**, A. J. Houtepen, K.D. Parrish, P.Kanjanaboos, J.A. Malen, E.H. Sargent,
  Microsecond-sustained lasing from colloidal quantum dot solids,
  Nature Commun. **2015**, *Accepted*.
- J.Y. Kim, V.Adinolfi, B.R. Sutherland, **O.Voznyy**, S. J. Kwon, T.W.Kim, J.Kim, H.Ihee, D.Zhitomirsky, K.Kemp, M.Adachi, M.Yuan, I.Kramer, S.Hoogland, E.H. Sargent,
  Single-step fabrication of quantum funnels via centrifugal colloidal casting of nanoparticle films,
  Nature Commun. **2015**, *Accepted*.
- J. Xu, A. Buin, A.H. Ip, W. Li, **O. Voznyy**, R.Comin, M. Yuan, S. Jeon, Z. Ning, J. McDowell, P. Kanjanaboos, J.-P. Sun, X. Lan, LN. Quan, I.G. Hill, P. Maksymovych, E.H. Sargent,
  Perovskite:fullerene hybrid materials eliminate hysteresis in planar diodes,
  Nature Commun. **2015**, 6, 7081.
- F.Fan,* P.Kanjanaboos,* M.Saravanapavanantham,* E.Beauregard, G.Ingram, E.Yassitepe, M.Adachi, **O.Voznyy**, A.K. Johnston, G.Walters, G-H.Kim, Z.-H.Lu, E.H. Sargent,
  Colloidal $CdSe_{1-x}S_x$ nanoplatelets with narrow and continuously-tunable electroluminescence,
  Nano Lett. **2015**, *DOI: 10.1021/acs.nanolett.5b01233t.*
- G. H. Carey, L. Levina, R. Comin, **O. Voznyy**, E. H. Sargent,
  Record diffusion length in colloidal quantum dot solids via mutual dot-to-dot surface passivation
  Adv. Mater. **2015**, 27, 3325.
- A. Ip*, A. Kiani*, I. Kramer*, **O. Voznyy**, H.F.Movahed, L.Levina, S.Hoogland, E. H. Sargent,
  Engineering polydispersity and mobility for infrared quantum dot photovoltaics,
  ACS Nano, **2015**, *Accepted*.
- L. Protesescu, M. Nachtegaal, **O. Voznyy,** O. Borovinskaya, A. J. Rossini, L. Emsley, C. Copéret, D. Günther, E. H. Sargent, M. V. Kovalenko
  Atomistic description of thiostannate-capped CdSe nanocrystals,

J. Am. Chem. Soc. **2015**, 137, 1862.

- R. Comin, G. Walters, E. Thibau, **O.Voznyy**, Z.-H. Lu, E. H. Sargent,
  Structural, optical, and electronic studies of wide-bandgap lead halide perovskites,
  J. Mater. Chem. C, **2015**, *Accepted*.
- B. R. Sutherland,* S. Hoogland,* M. M. Adachi, P. Kanjanaboos, C. T. O. Wong, J. J. McDowell, J. Xu, **O. Voznyy**, Z. Ning, A. J. Houtepen, E. H. Sargent,
  Perovskite thin films via atomic layer deposition,
  Adv. Mater. **2015**, 27, 53.

2014

- Z. Ning, H. Dong, Q. Zhang, **O. Voznyy**, E. H. Sargent,
  Solar cells based on inks of n-type colloidal quantum dots,
  ACS Nano, **2014**, 8, 10321.
- H. Liu, M. Li, **O. Voznyy**, L. Hu, D. Zhou, Z. Xia, E. H. Sargent, J. Tang,
  Physically flexible, rapid-response gas sensor based on colloidal quantum dot solids,
  Adv. Mater., **2014**, 26, 2718.
- A. Buin, P. Pietsch, **O. Voznyy**, R. Comin, A. Ip, E. H. Sargent,
  Materials processing routes to trap-free halide perovskites,
  Nano Lett. **2014**, 14, 6281.
- G. Carey, I. Kramer, P. Kanjanaboos, G. Moreno-Bautista, **O. Voznyy**, L. Rollny, J. Tang, S. Hoogland, E. H. Sargent,
  Electronically active impurities in colloidal quantum dot solids,
  ACS Nano **2014**, 8, 11763.

2013

- **O. Voznyy**, S. M. Thon, A. Ip, A. E. H. Sargent,
  Dynamic trap formation and elimination in colloidal quantum dots,
  J. Phys. Chem. Lett., **2013**, 4, 987–992.
- D. Zhitomirsky*, **O. Voznyy***, S. Hoogland, E. H. Sargent,
  Measuring charge carrier diffusion in coupled colloidal quantum dot solids,
  ACS Nano, **2013**, 7, 5282–5290. **Contributed equally.*
- S. M. Thon, A. Ip, **O. Voznyy**, L. Levina, K. Kemp, G. Carey, S. Masala, E. H. Sargent,
  Role of bond adaptability in the passivation of colloidal quantum dot solids,
  ACS Nano, **2013**, 7, 7680.
- A. Fischer, L. Rollny, J. Pan, G. Carey, S. Thon, S. Hoogland, **O.Voznyy**, D. Zhitomirsky, J. Y. Kim, O. Bakr, E. H. Sargent,
  Directly-deposited quantum dot solids using a colloidally stable nanoparticle ink,
  Adv. Mater., **2013**, 25, 5742.
- M. Yuan, D. Zhitomirsky, V. Adinolfi, **O. Voznyy**, K. Kemp, Z. Ning, X. Lan, J. Xu, J. Y. Kim, H. Dong, E. H. Sargent,
  Doping control via molecularly-engineered surface ligand coordination,
  Adv. Mater., **2013**, 25, 5586.

- A. O. Ballouli, L. Rollny, J. Pan, **O. Voznyy**, O. Bakr, E. H. Sargent,
  Automated synthesis of photovoltaic-quality colloidal quantum dots,
  Adv. Mater., **2013**, 7, 10158.

- Kh. Katsiev, A.Ip, A.Fischer, I.Tanabe, X.Zhang, A.Kirmani, **O.Voznyy**, L.Rollny, K.W.Chou, S.M.Thon, G.Carey, X.Cui, A.Amassian, P.Dowben, E.H.Sargent, O.Bakr,
  Complete in-gap electronic structure of colloidal quantum dot films and its correlation with transport and solar cell performance,
  Adv. Mater., **2013**, 26, 937.

- Z. Ning, D. Zhitomirsky, V.Adinolfi, B. Sutherland, J. Xu, **O.Voznyy**, P.Maraghechi, X.Lan, S. Hoogland, Y. Ren, E.H.Sargent,
  Graded doping for enhanced colloidal quantum dot photovoltaics,
  Adv. Mater., **2013**, 25, 1719–1723.

- F. Li, L. Tang, **O. Voznyy**, J. Gao, Q. Guo,
  The striped phases of ethylthiolate monolayers on the Au(111) surface: a scanning tunneling microscopy study,
  J. Chem. Phys., **2013**, 138, 194707.

- P. Maksymovych, D. Sorescu, **O. Voznyy**, J. T. Yates, Jr.,
  Hybridization of phenylthiolate- and methylthiolate-adatom species at low coverage on the Au(111) surface,
  J. Am. Chem. Soc., **2013**, 135, 4922-4925.

2012

- A.Ip, S.Thon, S.Hoogland, **O.Voznyy**, D.Zhitomirsky, R.Debnath, L.Levina, L.Rollny, G.Carey, A.Fischer, K.Kemp, I.Kramer, Z.Ning, A.Labelle, K.Chou, A.Amassian, E.H.Sargent,
  Hybrid passivated colloidal quantum dot solids,
  Nature Nanotech., **2012**, 7, 577-582.

- Z.Ning, Y.Ren, S.Hoogland, **O.Voznyy**, L.Levina, P.Stadler, X.Lan, D.Zhitomirsky, E.H.Sargent
  All-inorganic colloidal quantum dot photovoltaics employing solution-phase halide passivation
  Adv. Mater., **2012**, 24, 6295–6299.

- D. Zhitomirsky, M. Furukawa, J.Tang, P. Stadler, S. Hoogland, **O.Voznyy**, H.Liu, E. H. Sargent
  N-type colloidal-quantum-dot solids for photovoltaics,
  Adv. Mater., **2012**, 24, 6181–6185.

2011

- M. Korkusinski, **O. Voznyy,** P. Hawrylak,
  Theory of highly excited semiconductor nanostructures including Auger coupling: exciton-biexciton mixing in CdSe nanocrystals,
  Phys. Rev. B, **2011**, 84, 155327.

- P. Potasz, D. Guclu, **O. Voznyy**, J.A. Folk, P. Hawrylak,
  Electronic and magnetic properties of triangular graphene quantum rings,
  Phys. Rev. B, **2011**, 83, 174441.

2010 and before

- M. Korkusinski, **O. Voznyy**, P. Hawrylak,
  Fine structure and size dependence of exciton and biexciton optical spectra in CdSe nanocrystals,
  Phys. Rev. B, **2010**, 82, 245304.

- D. Guclu, P. Potasz, **O. Voznyy**, M. Korkusinski, P. Hawrylak,
  Magnetism and correlations in fractionally filled degenerate shells of graphene quantum dots,
  Phys. Rev. Lett, **2009**, 103, 246805.

- R. Wang, C. I. Ratcliffe, X. Wu, **O. Voznyy**, Ye Tao, K.Yu,
  Magic-sized Cd_3P_2 II−V nanoparticles exhibiting bandgap photoemission,
  J. Phys. Chem. C, **2009**, 113, p.17979.

- **O. Voznyy**, J. J. Dubowski,
  c(4 x 2) structures of alkanethiol monolayers on Au (111) compatible with the constraint of dense packing,
  Langmuir, **2009**, 25, p.7353.

- **O. Voznyy**, J. J. Dubowski,
  Structure of thiol self-assembled monolayers commensurate with the GaAs (001) surface,
  Langmuir, **2008**, 24, p.13299.

- **O. Voznyy**, J. J. Dubowski,
  Adsorption kinetics of hydrogen sulfide and thiols on GaAs (001) surfaces in a vacuum,
  J. Phys. Chem. C, **2008**, 112, p.3726.

- **O. Voznyy**, J. J. Dubowski,
  Structure, bonding nature, and binding energy of alkanethiolate on As-rich GaAs (001) surface: a density functional theory study,
  J. Phys. Chem. B, **2006**, 110, p.23619.

- **O. Voznyy**, R. Stanowski, J. J. Dubowski,
  Multibandgap quantum well wafers by IR laser quantum well intermixing: simulation of the lateral resolution of the process,
  Journal of Laser Micro / Nanoengineering, **2006**, 1, p.48.

- R. Stanowski, **O. Voznyy**, J. J. Dubowski,
  Finite element model calculations of temperature profiles in Nd:YAG laser annealed GaAs/AlGaAs quantum well microstructures,
  Journal of Laser Micro / Nanoengineering, **2006**, 1, p.17.

- V. Deibuk, **O. Voznyy**,
  Thermodynamic stability and charge redistribution in ternary AlGaN, InGaN, and InAlN alloys,
  Semiconductors, **2005**, 39, p.623.

- **O.Voznyy**, V.Deibuk,
  The role of alloying effects in the formation of electronic structure of unordered group III nitride solid solutions,
  Semiconductors, **2004**, 38, p.304.

- V. Deibuk, **O. Voznyy**, M. M. Sletov,
  Features of optical properties of aluminum gallium nitride solid solutions,
  Semiconductors, **2002**, 36, p.398.
- V. Deibuk, **O. Voznyy**, M. M. Sletov,
  Band structure and spatial charge distribution in AlGaN,
  Semiconductors, **2000**, 34, p.35.

CONFERENCE PRESENTATIONS

Invited talks

- **O. Voznyy**,
  Defects, surfaces and interfaces of hybrid perovskites,
  DFT modeling of perovskites, CECAM workshop, Lausanne, August **2015**.
- **O. Voznyy**, E. H. Sargent,
  Colloidal quantum dot solar cells: perspectives and challenges,
  Nanostructured materials for solar energy conversion and storage, CSC, Ottawa, June **2015**.
- **O. Voznyy**, E. H. Sargent,
  Solution processed nanomaterials for optoelectronic and energy applications,
  Advances functional nanomaterials, CSC, Ottawa, June **2015**.
- **O. Voznyy**,
  Optical-only methods for measuring charge carrier diffusion in colloidal quantum dot films,
  SPIE Photonics West, LASE, San Francisco, CA, February **2014**.
- **O. Voznyy**,
  Colloidal quantum dots solids: models and designs,
  ACS National Meeting, New Orleans, LA, April **2013**.
- **O. Voznyy**, E. H. Sargent,
  Progress in colloidal quantum dot photovoltaic performance,
  ACS National Meeting, New Orleans, LA, April **2013**.

Contributed talks

- **O. Voznyy**, A. Kiani, D. Zhitomirsky, L. Levina, G. Carey, E.H. Sargent,
  Enhanced carrier diffusion lengths in solution processed photovoltaic materials,
  HOPV15, Rome, Italy, May **2015**.
- **O.Voznyy**, D.Zhitomirsky, L.Levina, S.Hoogland, K.Kemp, A.H. Ip, S.M. Thon, E.H. Sargent,
  Engineering Colloidal Quantum Dot Solids within, and beyond, the Mobility-Invariant Regime,
  NANAX6, Bad Hofgastein, Austria, May **2014**.
- **O. Voznyy**, S. M. Thon, A. Ip, E. H. Sargent,
  Elimination of deep surface traps in charged colloidal PbS and CdSe quantum dots,
  APS March Meeting, Baltomire, MD, March **2013**.
- **O. Voznyy**,
  Mobile surface traps in CdSe nanocrystals with carboxy ligands,
  APS March Meeting, Dallas, TX, March **2011**.

- **O. Voznyy**, M. Korkusinski, P. Hawrylak,
  Atomistic calculations of exciton-biexciton mixing and lifetime in CdSe nanocrystals,
  APS March Meeting, Dallas, TX, March **2011**.
- **O.Voznyy**, M. Korkusinski, E. Kadantsev, P. Hawrylak,
  Atomistic calculations of the biexciton finestructure in CdSe nanocrystals,
  APS March Meeting, Portland, OR, March **2010**.
- D. Guclu, P. Potasz, **O. Voznyy**, M. Korkusinski, P. Hawrylak,
  Magnetism and Correlations of Fractionally Filled Zero-energy States in Graphene QDots,
  APS March Meeting, Portland, OR, March **2010**.
- **O.Voznyy**, E. Kadantsev, M. Korkusinski, P. Hawrylak,
  Effect of surface ligands on the electronic and optical properties of CdSe nanocrystals,
  MRS Fall Meeting, Boston, MA, November **2009**.
- **O.Voznyy**, J.J.Dubowski,
  Structure and adsorption mechanisms of thiol self-assembled monolayers on GaAs (001) surfaces,
  APS March Meeting, New Orleans, LA, March **2008**.
- **O.Voznyy**, J.J.Dubowski,
  Reconstructions of the Au(111) and GaAs(001) surfaces driven by thiol-thiol interactions,
  Canadian Association of Physicists Congress, Quebec, QC, June **2008**.
- **O.Voznyy**, J.J.Dubowski,
  Adsorption and self-assembly of alkanethiols on GaAs (001) surface,
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