

## Publications list: Dr. Sergey Peredkov

### 2020

- Zimmermann, P., **Peredkov, S.**, Abdala P.M., DeBeer, S., Tromp, M., Müller, C., van Bokhoven, J.A. (2020). Modern X-ray spectroscopy: XAS and XES in the laboratory *Coordination Chemistry Reviews* 423, 213466. <https://doi.org/10.1016/j.ccr.2020.213466>
- Levin, N., **Peredkov, S.**, Weyhermüller, T., Rüdiger, O., Pereira, N.B., Grötzsch, D., Kalinko, A., DeBeer, S. (2020). Ruthenium 4d-to-2p X-ray Emission Spectroscopy: A Simultaneous Probe of the Metal and the Bound Ligands *Inorganic Chemistry* 59(12), 8272-8283. <https://doi.org/10.1021/acs.inorgchem.0c00663>

### 2017

- Szlachetko J., Nachtegaal M., Grolimund D., Knopp G., **Peredkov S.**, Czaplá–Masztafiak J., Milne C.J. (2017). A Dispersive Inelastic X-ray Scattering Spectrometer for Use at X-ray Free Electron Lasers *Applied Sciences* 7(9), 899. <https://doi.org/10.3390/app7090899>

### 2016

- **Peredkov S.**, Peters S., Al-Hada M., Erko A., Neeb M., Eberhardt W. (2016). Structural investigation of supported Cu<sub>n</sub>-clusters under vacuum and ambient air conditions using EXAFS spectroscopy *Catalysis Science & Technology* 6(18), 6942-6952. <https://doi.org/10.1039/c6cy00436a>

### 2015

- Meyer J., Niedner-Schatteburg G., **Peredkov S.**, Eberhardt W., Neeb M., Palutke S., Martins M., Wurth W. (2015). The spin and orbital contributions to the total magnetic moments of free Fe, Co and Ni clusters *Journal of Chemical Physics* 143(10), 104302. <https://doi.org/10.1063/1.4929482>
- Al-Hada, M., Peters, S., **Peredkov, S.**, Neeb, M., Eberhardt, W. (2015) Nanoisland formation of small Ag<sub>n</sub>-clusters on HOPG as determined by inner-shell photoionization spectroscopy *Surface Science* 639, 43-47. <https://doi.org/10.1016/j.susc.2015.03.016>
- Dielman, D., Tombers, M., Peters, L., Meyer, J., **Peredkov, S.**, Jalink, L., Neeb, M., Eberhardt, W., Rasing, T., Niedner-Schttteburg, G., Kirilyuk, A. (2015). Orbit and spin resolved magnetic properties of size selected [Co<sub>n</sub>Rh]<sup>+</sup> and [Co<sub>n</sub>Au]<sup>+</sup> nanoalloy clusters *Physical Chemistry Chemical Physics* 17(41), 28372-28378. <https://doi.org/10.1039/c5cp01923k>

### 2014

- Anh Nguyen, T.N., Knut, R., Fallahi, V., Chung, S., Le, Q.T., Mohseni, S.M., Karis, O., **Peredkov, S.**, Dumas, R.K., Miller, C.W., Åkermen, J. (2014). Depth-Dependent Magnetization Profiles of Hybrid Exchange Springs *Physical Review Applied* 2, 044014. <https://doi.org/10.1103/PhysRevApplied.2.044014>

- Kravtsova, A.N., Lomachenko, K.A., Soldatov, A.V., Meyer, J., Niedner-Schatteburg, G., **Peredkov, S.**, Eberhardt, W., Neeb, M. (2014). Atomic and electronic structure of free niobium nanoclusters: Simulation of the  $M_{4,5}$ -XANES spectrum of  $Nb_{13}^+$  *Journal of Electron Spectroscopy and Related Phenomena* 195, 189-194. <https://doi.org/10.1016/j.elspec.2014.07.005>
- Peters S., **Peredkov S.**, Al-Hada M., Neeb M., Eberhardt W. (2014). Positive XPS binding energy shift of supported  $Cu_N$ -clusters governed by initial state effects *Journal of Electron Spectroscopy and Related Phenomena* 192, 52-54. <https://doi.org/10.1016/j.elspec.2014.01.011>

## 2013

- Peters S., **Peredkov S.**, Neeb M., Al-Hada M., Eberhardt W. (2013). Size-dependent Auger spectra and two-hole Coulomb interaction of small supported Cu-clusters *Physical Chemistry Chemical Physics* 15(14), 9575-9580. <https://doi.org/10.1039/c3cp00109a>
- Peters, S., **Peredkov, S.**, Neeb, M., Eberhardt, W., Al-Hada, M. (2013). Size-dependent XPS spectra of small supported Au-clusters *Surface Science* 608, 129-134. <https://doi.org/10.1016/j.susc.2012.09.024>

## 2011

- **Peredkov S.**, Neeb M., Eberhardt W., Meyer J., Tombers M., Kampschulte H., Niedner-Schateburg G. (2011). Spin and Orbital Magnetic Moments of Free Nanoparticles *Physical Review Letters* 107, 233401. <https://doi.org/10.1103/PhysRevLett.107.233401>
- **Peredkov S.**, Savci A., Peters S., Neeb M., Eberhardt W., Kampschulte H., Meyer J., Tombers M., Hofferberth B., Menges F., Niedner-Schatteburg G. (2011). X-ray absorption spectroscopy of mass-selected transition metal clusters using a cyclotron ion trap: An experimental setup for measuring XMCD spectra of free clusters *Journal of Electron Spectroscopy and Related Phenomena* 184(3-6), 113-118. <https://doi.org/10.1016/j.elspec.2010.12.031>

## 2010

- Peters, S. **Peredkov, S.**, Ferretti, N., Savci, A. Neeb, M. (2010). Core-level photoionization spectroscopy of supported metal clusters:  $Cu_{55}$  on silica *Journal of Electron Spectroscopy and Related Phenomena* 181(2-3), 140-144. <https://doi.org/10.1016/j.elspec.2010.01.004>
- Peters, S. Peredkov, S., Balkaya, B., Ferretti, N., Neeb, M., Eberhardt, W. (2010). Evolution of metallic screening in small metal clusters probed by PCI-Auger spectroscopy *Physical Chemistry Chemical Physics* 12(33), 9867-9871. <https://doi.org/10.1039/c004334f>

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- Peters, S. **Peredkov, S.**, Balkaya, B., Ferretti, N., Savci, A., Vollmer, A., Neeb, M., Eberhardt, W. (2009). Inner-shell photoionization spectroscopy on deposited metal clusters using soft x-ray synchrotron radiation: An experimental setup *Review of Scientific Instruments* 80, 125106. <https://doi.org/10.1063/1.3267193>

## 2008

- Tchapyguine, M., **Peredkov, S.**, Rosso, A., Bradeanu, I., Öhrwall, G., Legendre, S., Sorensen, S., Mårtensson, N., Svensson, S., Björneholm, O. (2008). Absolute core-level binding energy shifts between atom and solid: The Born-Haber cycle revisited for free nanoscale metal clusters *Journal of Electron Spectroscopy and Related Phenomena* 166-167, 38-44.  
<https://doi.org/10.1016/j.elspec.2008.05.001>

## 2007

- Tchapyguine, M., **Peredkov, S.**, Rosso, A., Schulz, J., Öhrwall, G., Lundwall, M., Rander, T., Lindblad, A., Bergersen, H., Svensson, S., Sorensen, S.L., Mårtensson, N., Björneholm, O. (2007). Direct observation of the non-supported metal nanoparticle electron density of states by X-ray photoelectron spectroscopy *The European Physical Journal D* 47(2), 295-299.  
<https://doi.org/10.1140/epjd/e2007-00252-0>
- Tchapyguine, M., Kivimäki, A., **Peredkov, S.**, Sorensen, S.L. (2007). Localized versus delocalized excitations just above the 3d threshold in krypton clusters studied by Auger electron spectroscopy *Journal of Chemical Physics* 127, 124314. <https://doi.org/10.1063/1.2770460>
- **Peredkov S.**, Rosso A., Öhrwall G., Martensson N., Lundwall M., Rander T., Lindblad A., Bergersen H., Svensson S., Sorensen S. L., Björneholm O., Tchapyguine M. (2007). Size determination of free metal clusters by core-level photoemission from different initial charge states *Physical Review B* 76, 081402. <https://doi.org/10.1103/PhysRevB.76.081402>
- Peredkov S., Tchapyguine M., Schulz J., Sorensen S.L., Martensson N., Öhrwall G., Lundwall M., Rander T., Lindblad A., Bergersen H., Svensson S., Björneholm O., Rosso A. (2007). Free nanoscale sodium clusters studied by core-level photoelectron spectroscopy *Physical Review B* 75, 235407. <https://doi.org/10.1103/PhysRevB.75.235407>

## 2006

- Lundwall M., Fink, R.F., Tchapyguine M., Lindblad, A., Öhrwall, G., Bergersen, H., **Peredkov, S.**, Rander, T., Svensson, S., Björneholm, O. (2006). Shell-dependent core-level chemical shifts observed in free xenon clusters *Journal of Physics B* 39(24), 5225. <https://doi.org/10.1088/0953-4075/39/24/018>
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- Artemiev, A., Snigirev, A., Kohn, V., Snigireva, I., Artemev, N., Grigoriev, M., **Peredkov, S.**, Glikin, L., Levtonov, M., Kvardakov, V., Zabelin, A., Maevskiy, A. (2006). X-ray parabolic lenses made from glassy carbon by means of laser *Review of Scientific Instruments* 77, 063113.  
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- Lundwall, M., Tchapyguine, M., Öhrwall, G., Lindblad, A., **Peredkov, S.**, Rander, T., Svensson, S., Björneholm, O. (2005). Enhanced surface sensitivity in AES relative to XPS observed in free argon clusters, *Surface Science* 594(1-3), 12-19. <https://doi.org/10.1016/j.susc.2005.07.007>
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## 2001

- Artemiev N., Hrdý J., **Peredkov S.**, Artemev A., Freund A., Tucoulou R. (2001). Sagittal focusing of synchrotron radiation diffracted on the walls of a longitudinal hole drilled into a single-crystal monochromator *Journal of Synchrotron Radiation* 8, 1207-1213. <https://doi.org/10.1107/S0909049501014364>

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- Bogdanov, A.L., **Peredkov, S.** (2000). Use of SU-8 photoresist for very high aspect ratio lithography *Microelectronic Engineering* 53(1-4), 493-496. [https://doi.org/10.1016/S0167-9317\(00\)00363-4](https://doi.org/10.1016/S0167-9317(00)00363-4)

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- Artemiev A.N., **Peredkov S.**, Rakhimbabaev T.Y., Zabelin A.V., Hrdý J. (1995). Spectrometer with vertical dispersion mode for studying chemical shifts in X-ray emission lines with the use of synchrotron radiation. Preliminary experiment *Nuclear Instruments & Methods in Physics Research A* 359(1-2), 270-273. [https://doi.org/10.1016/0168-9002\(94\)01643-7](https://doi.org/10.1016/0168-9002(94)01643-7)