

List of Publications

Prof. Dr. Olga Kasian

International journals with Peer-Review: 61

Other journals with Peer-Review: 6

Publications without Peer-Review: 30

Book Chapter: 1

Total number of publications 98

Invited Talks: 13

Talks at the conferences: 14

Total number 27

Publications

A) International journals with Peer-Review:

1. Y. Zhao, T.s Heumueller, J. Zhang, J. Luo, **O. Kasian**, S. Langner, C. Kupfer, B. Liu, Y. Zhong, J. Elia, A. Osvet, J. Wu, C. Liu, Z. Wan, C. Jia, N. Li, J. Hauch, C. J. Brabec, A bilayer conducting polymer structure for planar perovskite solar cells with over 1,400 hours operational stability at elevated temperatures. *Nature Energy* 2022, 7, 144–152.
2. B. Gault, K. Schweinar, S. Zhang, L. Lahn, C. Scheu, S.-H. Kim, **O. Kasian**, Correlating atom probe tomography with x-ray and electron spectroscopies to understand microstructure–activity relationships in electrocatalysts, *MRS Bulletin* 2022, 47, 718–726.
3. Y. Thompson, M. Polzer, J. Gonzalez-Gutierrez, **O. Kasian**, J. P. Heckl, V. Dalbauer, C. Kukla, P. J. Felfer, Fused Filament Fabrication-Based Additive Manufacturing of Commercially Pure Titanium. *Adv. Eng. Mater.* 2021, 23, 2100380
4. R. V. Mom, L. J. Falling, **O. Kasian**, G. Algara-Siller, D. Teschner, R. H. Crabtree, A. Knop-Gericke, K. J.J. Mayrhofer, J.-J. Velasco-Vélez, T. E. Jones, Operando Structure–Activity–Stability Relationship of Iridium Oxides during the Oxygen Evolution Reaction. *ACS Catal.* 2022, 12, 5174–5184
5. **O. Kasian**, T. Li, A.M. Mingers, K. Schweinar, A. Savan, A. Ludwig, K. J.J. Mayrhofer, Stabilization of an iridium oxygen evolution catalyst by titanium oxides. *J. Phys. Energy* 2021, 3, 034006. (Invited contribution to the special issue)
6. J. Chinnaiyah, **O. Kasian**, A. Dekshinamoorthy, S. Vijayaraghavan, K. Mayrhofer, S. Cherevko, F. Scholz, Tuning the Anodic and Cathodic Dissolution of Gold by Varying the Surface Roughness. *ChemElectroChem* 2021, 8(8), 1524-1530.

7. K. Schweinar, B. Gault, I. Mouton, and **O. Kasian**, On the Lattice Oxygen Exchange in Rutile IrO₂ During the Oxygen Evolution Reaction. *J. Phys. Chem. Lett.* 2020, 11 (13), 5008–5014.
8. K. Schweinar, R. Leanne Nicholls, C. Rajamathi, P. Zeller, M. Amati, L. Gregoratti, D. Raabe, M. Greiner, B. Gault and **O. Kasian**, Probing catalytic surfaces by correlative scanning photoemission electron microscopy and atom probe tomography. *J. Mater. Chem. A* 2020, 8, 388–400.
9. S. Zhang, I. Ahmet, S.-H. Kim, **O. Kasian**, A. M. Mingers, P. Schnell, M. Kölbach, J. Lim, A. Fischer, K. J.J. Mayrhofer, S. Cherevko, B. Gault, R. van de Krol, C. Scheu, Different Photostability of BiVO₄ in Near-pH-Neutral Electrolytes. *ACS applied energy materials*, 2020, 3 (10), 9523-9527.
10. F. D. Speck, F. S. M. Ali, M. T. Y. Paul, R. K. Singh, T. Böhm, A. Hofer, **O. Kasian**, S. Thiele, J. Bachmann, D. R. Dekel, T. Kallio, S. Cherevko, Improved Hydrogen Oxidation Reaction Activity and Stability of Buried Metal-Oxide Electrocatalyst Interfaces. *Chem. Mater.* 2020, 32 (18), 7716–7724.
11. V.A. Saveleva, L. Wang, **O. Kasian**, M. Batuk, J. Hadermann, J.-J. Gallet, F. Bournel, N. Alonso-Vante, G. Ozouf, C. Beauger, K.J.J. Mayrhofer, S. Cherevko, A.S. Gago, K.A. Friedrich, S. Zafeiratos, E.R. Savinova, Insight into the mechanisms of high activity and stability of iridium supported on antimony-doped tin oxide aerogel for anodes of proton exchange membrane water electrolyzers. *ACS Catal.* 2020, 10 (4), 2508-2516.
12. S.-H. Kim, J. Lim, R. Sahu, **O. Kasian**, L.T. Stephenson, C. Scheu, B. Gault, Direct imaging of dopant and impurity distributions in 2D MoS₂. *Adv. Mater.* 2020, 1907235.
13. K. Schweinar, S. Beeg, C. Hartwig, C.R. Rajamathi, **O. Kasian**, S. Piccinin, M.J. Prieto, L.C. Tanase, D.M. Gottlob, T. Schmidt, D. Raabe, R. Schlögl, B. Gault, T.E. Jones, M.T. Greiner, Formation of a 2D Meta-stable Oxide by Differential Oxidation of AgCu Alloys. *ACS Applied Materials & Interfaces* 2020, 12 (20), 23595-23605.
14. A. J. Breen, L. T. Stephenson, B. Sun, Y. Li, **O. Kasian**, D. Raabe, M. Herbig, B. Gault, Solute hydrogen and deuterium observed at the near atomic scale in high-strength steel. *Acta Materialia*, 2020, 188, 108-120.
15. M. Rohloff, B. Anke, D. Wiedemann, A. C. Ulpe, **O. Kasian**, S. Zhang, C. Scheu, T. Bredow, M. Lerch, A. Fischer, Synthesis and Doping Strategies to Improve the Photoelectrochemical Water Oxidation Activity of BiVO₄ Photoanodes. *Zeitschrift für Physikalische Chemie* 2020, 234 (4), 655-682.

16. J. Lim, S-H Kim, R. A. Armengol, **O. Kasian**, P.-P. Choi, L. Stephenson, B. Gault, C. Scheu, Atomic scale mapping of impurities in partially reduced hollow TiO₂ nanowires. *Angewandte Chemie International Edition* 2020, 59 (14), 5651-5655.
17. B. Scherrer, T. Li, A. Tsyganok, M. Döbeli, B. Gupta, K. D. Malviya, **O. Kasian**, N. Maman, B. Gault, D.A. Grave, A. Mehlman, I. Visoly-Fisher, D. Raabe, A. Rothschild, Defect segregation and its effect on the photoelectrochemical properties of Ti-doped hematite photoanodes for solar water splitting. *Chem. Mater.* 2020, 32, 3, 1031–1040.
18. **O. Kasian**, S. Geiger, T. Li, J. Grote, K. Schweinar, S. Zhang, C. Scheu, D. Raabe, S. Cherevko, B. Gault, K. Mayrhofer, Degradation of iridium oxides via oxygen evolution from the lattice: correlating atomic scale structure with reaction mechanisms. *Energy & Environmental Science* 2019, 12, 3548-3555.
19. K. Schweinar, **O. Kasian**, R. L. Nicholls, C. R. Rajamathi, P. Zeller, M. Amati, L. Gregoratti, D. Raabe, M. Greiner, B. Gault, An integrated workflow to investigate electrocatalytic surfaces by correlative X-ray photoemission spectroscopy, scanning photoemission electron microscopy and atom probe tomography. *Microscopy and Microanalysis* 2019, 25, 306-307.
20. M.D. Pohl, S. Haschke, D. Göhl, **O. Kasian**, J. Bachmann, K.J.J. Mayrhofer, I. Katsounaros, Extension of the Rotating Disk Electrode Method to Thin Samples of Non-Disk Shape. *Journal of The Electrochemical Society* 2019, 166(15), H791-H794.
21. S. Zhang, M. Rohloff, **O. Kasian**, A. M. Mingers, K. J.J. Mayrhofer, A. Fischer, C. Scheu, S. Cherevko, Dissolution of BiVO₄ Photoanodes Revealed by Time-Resolved Measurements Under Photoelectrochemical Conditions. *The Journal of Physical Chemistry C* 2019, 123 (38), 23410-23418.
22. M. Rabe, C. Toparli, Y.-H. Chen, **O. Kasian**, K. J. J. Mayrhofer, A. Erbe, Alkaline manganese electrochemistry studied by in situ and operando spectroscopic methods - metal dissolution, oxide formation and oxygen evolution. *Phys. Chem. Chem. Phys.* 2019, 21, 10457-10469.
23. M. Rohloff, B. Anke, **O. Kasian**, S. Zhang, M. Lerch, C. Scheu, A. Fischer, Enhanced Photoelectrochemical Water Oxidation Performance by Fluorine Incorporation in BiVO₄ and Mo:BiVO₄ Thin Film Photoanodes. *ACS Appl. Mater. Interfaces* 2019, 11, 16430-16442.
24. **O. Kasian**, S. Geiger, K. J. J. Mayrhofer, S. Cherevko, Electrochemical On-line ICP-MS in Electrocatalysis Research. *The Chemical Record* 2019, 19, 2130 – 2142.
25. T. Li[†], **O. Kasian**[†], S. Cherevko, S. Zhang, S. Geiger, C. Scheu, P. Felfer, D. Raabe, B. Gault, K. J.J. Mayrhofer, Atomic-scale insights into surface species of electrocatalysts in three dimensions. *Nature Catalysis* 2018, 1, 300-305. (†These authors contributed equally to this work)

26. **O. Kasian**, J.-P. Grote, S. Geiger, S. Cherevko, K. J.J. Mayrhofer, The common Intermediates of Oxygen Evolution and Dissolution Reactions during Water Electrolysis on Iridium. *Angewandte Chemie International Edition* 2018, 57, 2488-2491. (German version: **O. Kasian**, J.-P. Grote, S. Geiger, S. Cherevko, K. J.J. Mayrhofer, Die gemeinsamen Zwischenprodukte von Sauerstoffentwicklung und Auflösung während der Wasserelektrolyse an Iridium. *Angewandte Chemie* 2018, 130(9), 2514-2517).
27. S. Geiger[†], **O. Kasian**[†], M. Ledendecker, E. Pizzutilo, A. Mingers, W. T. Fu, O. Diaz-Morales, Z. Li, T. Oellers, L. Fruchter, A. Ludwig, K. Mayrhofer, M. Koper, and S. Cherevko, The Stability-number as a metric for electrocatalyst stability benchmarking. *Nature Catalysis* 2018, 1, 508-515. ([†]These authors contributed equally to this work)
28. F. Faisal, C. Stumm, M. Bertram, F. Waidhas, Y. Lykhach, S. Cherevko, F. Xiang, M. Ammon, M. Vorokhta, B. Šmíd, T. Skala, N. Tsud, A. Neitzel, K. Beranova, K. Prince, S. Geiger, **O. Kasian**, T. Wähler, R. Schuster, M. Schneider, V. Matolin, K. Mayrhofer, O. Brummel, and J. Libuda, Electrifying model catalysts for understanding electrocatalytic reactions in liquid electrolytes. *Nature Materials* 2018, 17, 592–598.
29. A. G. Hufnagel, H. Hajiyani, S. Zhang, T. Li, **O. Kasian**, B. Gault, B. Breitbach, T. Bein, D. Fattakhova-Rohlfing, C. Scheu, R. Pentcheva, Why Tin-Doping Enhances the Efficiency of Hematite Photoanodes for Water Splitting—The Full Picture. *Advanced Functional Materials* 2018, 1804472.
30. G. V. Fortunato, E. Pizzutilo, A. M. Mingers, **O. Kasian**, S. Cherevko, E. S. F. Cardoso, Karl J.J. Mayrhofer, G. Maia, M. Ledendecker, The Impact of Palladium Loading and Interparticle Distance on the Selectivity for the Oxygen Reduction Reaction Towards Hydrogen Peroxide. *J. Phys. Chem. C* 2018, 122 (28), 15878–15885.
31. N. L. De Silva, A. C. A. Jayasundera, A. Folger, **O. Kasian**, S. Zhang, C.-F. Yan, C. Scheu, J. Bandara, Superior solar-to-hydrogen energy conversion efficiency by visible light-driven hydrogen production via highly reduced Ti²⁺/Ti³⁺ states in blue-titanium dioxide photocatalyst. *Catalysis Science & Technology* 2018, 8, 4657-4664.
32. F. B. Ajdari, E. Kowsari, A. Ehsani, L. Chepyga, M. Schirowski, S. Jäger, **O. Kasian**, F. Hauke, T. Ameri, Melamine-functionalized graphene oxide: synthesis, characterization and considering as pseudocapacitor electrode material with intermixed POAP polymer. *Applied Surface Science* 2018, 459, 874-883.
33. M. Schalenbach, F. D. Speck, M. Ledendecker, **O. Kasian**, D. Goehl, A. M. Mingers, B. Breitbach, H. Springer, S. Cherevko, K. J.J. Mayrhofer, Nickel-molybdenum alloy catalysts for

- the hydrogen evolution reaction: Activity and stability revised. *Electrochimica Acta* 2018, 259, 1154-1161.
34. M. Schalenbach, A. R. Zeradjanin, **O. Kasian**, S. Cherevko, K. J.J. Mayrhofer, A Perspective on Low-Temperature Water Electrolysis—Challenges in Alkaline and Acidic Technology. *Int. J. Electrochem. Sci.* 2018, 13, 1173-1226.
 35. **O. Kasian**, S. Geiger, M. Schalenbach, A. M. Mingers, A. Savan, A. Ludwig, S. Cherevko, K. J.J. Mayrhofer, Using Instability of a Non-stoichiometric Mixed Oxide Oxygen Evolution Catalyst As a Tool to Improve Its Electrocatalytic Performance. *Electrocatalysis* 2018, 9(2), 139-145.
 36. F. Faisal, M. Bertram, C. Stumm, S. Cherevko, S. Geiger, **O. Kasian**, Y. Lykhach, O. Lytken, K. J.J. Mayrhofer, O. Brummel, J. Libuda, Atomically Defined Co₃O₄ (111) Thin Films Prepared in Ultrahigh Vacuum: Stability under Electrochemical Conditions. *The Journal of Physical Chemistry C* 2018, 122, 7236–7248.
 37. M. Schalenbach, **O. Kasian**, M. Ledendecker, F. D. Speck, A. M. Mingers, K. J.J. Mayrhofer, S. Cherevko, The Electrochemical Dissolution of Noble Metals in Alkaline Media. *Electrocatalysis* 2018, 9(2), 153-161.
 38. M. Schalenbach, **O. Kasian**, K. J.J. Mayrhofer, An alkaline water electrolyzer with nickel electrodes enables efficient high current density operation. *International Journal of Hydrogen Energy* 2018, 43, 11932-11938.
 39. S. Geiger, **O. Kasian**, A. M. Mingers, S. S. Nicley, K. Haenen, K. J.J. Mayrhofer, S. Cherevko, Catalyst stability benchmarking for the oxygen evolution reaction-the importance of backing electrode material and dissolution in accelerated aging studies. *ChemSusChem* 2017, 10 (21), 4140-4143.
 40. M. Ledendecker, J. Mondschein, **O. Kasian**, S. Geiger, D. Göhl, M. Schalenbach, A. Zeradjanin, S. Cherevko, R. E. Schaak, K. Mayrhofer, Stability and activity of non-noble based catalysts toward the hydrogen evolution reaction: feasible electrocatalysts in acidic medium? *Angewandte Chemie* 2017, 129, 9899 –9903.
 41. C. H. Choi, W. S. Choi, **O. Kasian**, A. K. Mechler, M. T. Sougrati, S. Brüller, K. Strickland, Q. Jia, S. Mukerjee, K. J.J. Mayrhofer, F. Jaouen, Unraveling the Nature of Sites Active toward Hydrogen Peroxide Reduction in Fe-N-C Catalysts. *Angewandte Chemie* 2017, 129, 8935 – 8938.
 42. E. Pizzutilo, **O. Kasian**, C. H. Choi, S. Cherevko, G. J. Hutchings, K. J.J. Mayrhofer, S. J. Freakley, Electrocatalytic synthesis of hydrogen peroxide on Au-Pd nanoparticles: From fundamentals to continuous production. *Chemical Physics Letters* 2017, 683, 436-442.

43. C. Toparli, S. W. Hieke, A. Altin, **O. Kasian**, C. Scheu, A. Erbe, State of the Surface of Antibacterial Copper in Phosphate Buffered Saline. *Journal of The Electrochemical Society* 2017, 164(12), H734-H742.
44. S. Geiger, **O. Kasian**, A. M. Mingers, K. J.J. Mayrhofer, S. Cherevko, Stability limits of tin-based electrocatalyst supports. *Scientific reports* 2017, 7, 4595.
45. **O. Kasian**, S. Geiger, P. Stock, G. Polymeros, B. Breitbach, A. Savan, A. Ludwig, S. Cherevko, K. J.J. Mayrhofer, On the Origin of the Improved Ruthenium Stability in RuO₂-IrO₂ Mixed Oxides. *Journal of The Electrochemical Society* 2016, 163 (11), F3099-F3104.
46. **O. Kasian**, N. Kulyk, A. Mingers, A. R. Zeradjanin, K. J.J. Mayrhofer, S. Cherevko, Electrochemical dissolution of gold in presence of chloride and bromide traces studied by on-line electrochemical inductively coupled plasma mass spectrometry. *Electrochimica Acta* 2016, 222, 1056-1063.
47. S. Geiger, **O. Kasian**, B. R. Shrestha, A. M. Mingers, K. J.J. Mayrhofer, and S. Cherevko, Activity and Stability of Electrochemically and Thermally Treated Iridium for the Oxygen Evolution Reaction. *Journal of The Electrochemical Society* 2016, 163 (11), F3132-F3138.
48. S. Nizamov, **O. Kasian**, V.M. Mirsky, Individual Detection and Electrochemically Assisted Identification of Adsorbed Nanoparticles by Using Surface Plasmon Microscopy, *Angewandte Chemie International Edition* 2016, 55(25), 7247-7251. (German version: S. Nizamov, **O. Kasian**, V.M. Mirsky, Einzelnachweis und elektrochemisch unterstützte Identifizierung adsorbierter Nanopartikel mit Oberflächenplasmonen-Mikroskopie, *Angewandte Chemie* 2016, 128(25), 7363-7367).
49. S. Cherevko, S. Geiger, **O. Kasian**, A. Mingers, K. J.J. Mayrhofer, Oxygen evolution activity and stability of iridium in acidic media. Part 1.-Metallic iridium, *Journal of Electroanalytical Chemistry* 2016, 773, 69-78.
50. S. Cherevko, S. Geiger, **O. Kasian**, A. Mingers, K. J.J. Mayrhofer, Oxygen evolution activity and stability of iridium in acidic media. Part 2.-Electrochemically grown hydrous iridium oxide, *Journal of Electroanalytical Chemistry* 2016, 773, 102-110.
51. S. Cherevko, S. Geiger, **O. Kasian**, N. Kulyk, J.-P. Grote, A. Savan, B. R. Shrestha, S. Merzlikin, B. Breitbach, A. Ludwig, K. J.J. Mayrhofer, Oxygen and hydrogen evolution reactions on Ru, RuO₂, Ir, and IrO₂ thin film electrodes in acidic and alkaline electrolytes: a comparative study on activity and stability, *Catalysis Today* 2016, 262, 170-180.

52. C. H. Choi, C. Baldizzone, G. Polymeros, E. Pizzutilo, **O. Kasian**, A. K. Schuppert, N. R. Sahraie, M.-T. Sougrati, K. J.J. Mayrhofer, F. Jaouen, Minimizing operando demetallation of Fe-NC electrocatalysts in acidic medium, *ACS Catalysis*, 2016, 6(5), 3136–3146.
53. **O.I. Kasian**, T.V. Luk'yanenko, R. Amadelli, A.B. Velichenko, Anodes Based on Pt Doped Titanium Sub-Oxides. *ECS Transactions* 2014, 58(19), 75–84.
54. **O.I. Kasian**, T.V. Luk'yanenko, P. Demchenko, R.E. Gladyshevskii, R. Amadelli, A.B. Velichenko, Electrochemical properties of thermally treated platinized Ebonex[®] with low content of Pt. *Electrochimica Acta* 2013, 109, 630–637.
55. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Anodic Oxidation of Cr³⁺ Ions in a Chromium Electroplating Bath on Pt and Composite TiO_x/PtO_y. *Russian Journal of Electrochemistry* 2013, 49(12), 1165–1170.
56. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Electrochemical Properties of Heat-Treated Platinized Titanium. *Protection of Metals and Physical Chemistry of Surfaces* 2013, 49(5), 559–566.
57. **O.I. Kasian**, T.V. Luk'yanenko, R. Amadelli, A.B. Velichenko, Electrochemical Properties of Ebonex[®]/Pt Anodes. *Russian Journal of Electrochemistry* 2013, 49(6), 557–562.
58. **O. Kasian**, T. Luk'yanenko, A. Velichenko, Oxidation of Cr³⁺-Ions at the Composite TiO_x/PtO_y Electrode. *ECS Transactions* 2013, 45(9), 13–18.
59. A.B. Velichenko, **O.I. Kasian**, T.V. Luk'yanenko, P.Yu. Demchenko, R.E. Gladyshevskii, R. Amadelli, Physicochemical Properties and Electrochemical Behavior of Ebonex/Pt-Based Materials. *Protection of Metals and Physical Chemistry of Surfaces* 2013, 49(6), 705–711.
60. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Anody na osnove Ebonex/Pt dlya elektrolitov khromirovaniya na osnove solei Cr(III) (in Russian)[Ebonex/Pt-based anodes for chromium electroplating based on Cr(III) salts]. *Voprosy Khimii i Khimicheskoi tekhnologii* 2013, No. 4, 163–169.
61. **O. Kasian**, T. Luk'yanenko, A. Velichenko, R. Amadelli, Electrochemical Behavior of Platinized Ebonex[®] Electrodes. *International Journal of Electrochemical Science* 2012, 7, 7915–7926.
62. **O. Kasian**, T. Luk'yanenko, A. Velichenko, Anodic decomposition of complexing agents in electrolytes based on Cr(III) salts at composite TiO_x/PtO_y electrodes. *Chemistry and Chemical Technology* 2012, 6(3), 327–330.
63. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Anodnoe povedenie razlichnykh elektrodnykh materialov v elektrolitakh na osnove solei Cr(III) (in Russian) [Anodic behavior of different

- electrodes in electrolytes based on Cr(III) salts]. *Voprosy Khimii i Khimicheskoi tekhnologii* 2012, No. 1, 168–172.
64. T.V. Luk'yanenko, **O.I. Kasian**, L.V. Dmitrikova, R. Amadelli, Elektrokhimicheskoe okislenie organicheskikh vestchestv na elektrokatalizatorakh na osnove dioksida svintsa (in Russian) [Electrooxidation of organic compounds on lead dioxide based electrocatalysts]. *Voprosy Khimii i Khimicheskoi tekhnologii* 2011, No. 4(2), 31–34.
65. **O.I. Kasian**, T.V. Luk'yanenko, Anodnye processy v elektrolitakh na osnove solei Cr(III) (in Russian) [Anodic processes in electrolytes based on Cr(III) salts]. *Voprosy Khimii i Khimicheskoi tekhnologii* 2011, No. 4(1), 230–231.
66. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Razrushenie karbamida v elektrolitakh khromirovaniya na osnove solei Cr(III) (in Russian) [Decomposition of carbamide in a Cr(III) electroplating bath]. *Voprosy Khimii i Khimicheskoi tekhnologii* 2010, No. 6, 131–134.
67. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Kompleksoobrazovanie v sisteme Cr(III)–karbamid v elektrolite khromirovaniya (in Russian) [Complexation in system Cr(III)–carbamide in chromium electrolyte]. *Voprosy Khimii i Khimicheskoi tekhnologii* 2010, No. 5, 129–133.

B) Publications without Peer-Review:

1. **O. Kasian**, K. Schweinar, B. Gault. From Atomic-Scale Understanding to Design of Advanced Electrocatalyst Materials, PRiME 2020, ECS Meeting Abstracts, **MA2020-02**, 3154.
2. **O. Kasian**, K. Schweinar, S. Cherevko, B. Gault, K.J. Mayrhofer. Correlating Atomic Scale Structure with Reaction Mechanisms: Electrocatalytic Evolution of Oxygen. 70th Annual Meeting of the International Society of Electrochemistry, Durban, South Africa, 04-09.08.2019
3. J. Lim, S.-H. Kim, R. Sahu, R. Aymerich Armengol, **O. Kasian**, P.-P. Choi et al. Detection of trace impurities and other defects in functional nanomaterials. Talk presented at International Workshop on Advanced and In-situ Microscopies of Functional Nanomaterials and Devices, IAMNano 2019. Düsseldorf, Germany. 2019-10-27 - 2019-10-30.
4. **O. Kasian**, K. Schweinar, T. Li, K. J. J. Mayrhofer, B. Gault. Tuning Fundamental Properties of Ir-Based Materials to Enhance Their Electrocatalytic Performance in the Oxygen Evolution Reaction. 237th ECS Meeting, May 10, 2019 - May 14, 2020, Montreal, Canada.
5. K. Schweinar, B. Gault, M. Greiner, D. Raabe and **O. Kasian**. Atomic-Scale View into the Degradation of Ir-Ru Alloys during Anodic Oxygen Evolution. 237th ECS Meeting, May 10, 2019 - May 14, 2020, Montreal, Canada.

6. K. Schweinar, S. H. Kim, J. Lim, C. Scheu, D. Raabe, **O. Kasian**, and B. Gault. New Frontiers in Electrocatalyst Characterization – Three Dimensional Atomic-Scale Insights By Atom Probe Tomography. 237th ECS Meeting, May 10, 2019 - May 14, 2020, Montreal, Canada.
7. F. D. Speck, M. T. Y. Paul, S. M. F. Ali, R. K. Singh, T. Böhm, **O. Kasian**, D. R. Dekel, T. Kallio and S. Cherevko. 237th ECS Meeting, May 10, 2019 - May 14, 2020, Montreal, Canada.
8. S. Cherevko, K. Mayrhofer, **O. Kasian**, S. Geiger. Iridium-Based Catalysts for Acidic Water Splitting: Oxygen Evolution and Dissolution Mechanisms, Proceedings of the 235th ECS Meeting, May 26, 2019 - May 30, 2019, Dallas, TX.
9. K. Mayrhofer, S. Cherevko, **O. Kasian**, S. Geiger, M. Ledendecker, Fundamental Insights into Catalyst Stability in Low-Temperature Electrolysis, 235th ECS Meeting, May 26, 2019 - May 30, 2019, Dallas, TX.
10. S. Zhang, M. Rohloff, **O. Kasian**, A. M. Mingers, K. J. J. Mayrhofer, A. Fischer, S. Cherevko, C. Scheu, In-operando photocorrosion study on BiVO₄ photoanodes, International Bunsen Discussion Meeting, April 1 – 5, 2019 in Taormina, Italy.
11. K. Schweinar, S. Beeg, C. Hartwig, C. R. Rajamathi, **O. Kasian**, T. Jones, , et al. The surface structure of AgCu catalysts in ethylene epoxidation. Poster presented at Tenth Joint BER II and BESSY II User Meeting, Helmholtz Zentrum Berlin, Berlin, Germany, 2018.
12. **O. Kasian**, S. Geiger, S. Cherevko, B. Gault, K. J.J. Mayrhofer, Atomic scale insights into dynamic transformation of catalytic surfaces under oxygen evolution conditions, Electrochem 2018, Lancaster, UK, 17-18 September, 2018
13. **O. Kasian**, S. Geiger, D. J.S. Sandback, M. Schalenbach, S. Cherevko, and K. J. J. Mayrhofer, Oxygen Evolution and Dissolution of Iridium Based Water Splitting Anodes. Proceedings of the 232th ECS Meeting 2017, National Harbor, MD, (October 1-5, 2017).
14. **O. Kasian**, S. Geiger, S. Cherevko, and K. J. J. Mayrhofer, Mixed Oxide Electrocatalysts in Acidic Water Electrolysis: Activity and Stability Challenges. Proceedings of the 230th ECS Meeting/PRiME 2016, Honolulu, Hawaii, (October 2-7, 2016).
15. **O. Kasian**, S. Geiger, A. Mingers, S. Cherevko, K. J.J. Mayrhofer, Reactively sputtered iridium oxide thin films: stoichiometry control for improvement of the oxygen evolution electrocatalyst performance. Abstracts of ECAT 2016 International Symposium on Electrocatalysis: a Key of Sustainable Society, Kanagawa, Japan, September 11-14, 2016, 20.
16. **O. Kasian**, S. Cherevko, S. Geiger, G. Polymeros, A. Savan, A. Ludwig, K. J.J. Mayrhofer, RuO₂-IrO₂ Mixed Oxide Anodes for Oxygen Evolution Reaction: Challenge in Stability Improvement.

- Abstracts of 67th Annual Meeting of the the International Society of Electrochemistry, The Hague, The Netherlands, August 21-26, 2016.
17. S. Cherevko, **O. Kasian**, E. Pizzutilo, S. Geiger, A. Mingers, N. Kulyk, K. J. J. Mayrhofer, Noble metals dissolution/corrosion. *Electrochemistry 2016*, September 26th – 28th, 2016.
 18. **O. Kasian**, S. Geiger, G. Polymeros, A. Savan, A. Ludwig, S. Cherevko, K. J. J. Mayrhofer, On the origin of the improved ruthenium stability in the RuO₂–IrO₂ mixed oxide anodes for water electrolysis. *Electrochemistry 2016*, September 26th – 28th, 2016.
 19. S. Geiger, **O. Kasian**, J.-P. Grote, A. M. Mingers, T. Oellers, A. Ludwig, K. J. J. Mayrhofer, S. Cherevko, Low iridium catalyst loading challenges in PEM water electrolysis. *Electrochemistry 2016*, September 26th – 28th, 2016.
 20. V. M. Mirsky, S. Nizamov, **O. Kasian**, Plasmonic detection of electrochemical conversion of single nanoparticles. Abstracts of 67th Annual Meeting of the the International Society of Electrochemistry, The Hague, The Netherlands, August 21-26, 2016.
 21. S. Geiger, **O. Kasian**, S. Cherevko, K. J. J. Mayrhofer, Fine Tuning of the Oxygen Evolution Reaction Activity and Stability of Hydrous Iridium Oxides by Thermal Treatment. Proceedings of the 229th ECS Meeting MA2016-01 San Diego, California, 29 May-2 June, 2016, 1425.
 22. S. Cherevko, G.P. Keeley, S. Geiger, G. Polymeros, **O. Kasian**, N. Kulyk, K.J.J. Mayrhofer, Platinum Dissolution as one of the main Fuel Cell Electrocatalyst Degradation Mechanisms. Proceedings of the 18th Topical Meeting of the International Society of Electrochemistry, Gwangju, South Korea, 8-11 March, 2016, 1425.
 23. A.V. Ivanov, **O.I. Kasian**, Physicochemical properties of anodes based on platinized Ebonex. Proceedings of the International Scientific and Technical Conference “Technology – 2014”, Severodonetsk, Ukraine, April 2014, 189-192.
 24. **O.I. Kasian**, T.V. Luk’yanenko, A.B. Velichenko, Anodes Based on Platinized Ebonex[®]. Proceedings of the 224th ECS Meeting, San Francisco, California, October 27 – November 1 2013, 2423.
 25. O.P. Nerodenko, **O.I. Kasian**, Platinized titanium anodes obtained by combined electrochemically-pyrolytic method. Proceedings of the 6th International Scientific and Technical Conference “Chemistry and Modern Technologies”, Dnipropetrovsk, Ukraine, April 2013, 216.
 26. Yu.A. Velichenko, **O.I. Kasian**, Electrochemical behavior of Ebonex/Pt anodes. Proceedings of the International Scientific and Technical Conference “Technology – 2013”, Severodonetsk, Ukraine, April 2013, 111-113.

27. **O. Kasian**, A. Velichenko, Anodes for a Trivalent Chromium Electroplating Bath. Proceedings of the 3rd International Conference of Young Scientists CCT-2013, Lviv, Ukraine, November 21-23 2013, 152-153.
28. **O.I. Kasian**, T.V. Luk'yanenko, A.B. Velichenko, Oxidation of Cr³⁺-ions at the composite TiO_x/PtO_y electrode. Proceedings of the 221st ECS Meeting, Seattle, Washington, May 6-10 2012, 1001.
29. **O.I. Kasian**, Anodic oxidation of trivalent chromium ions at composite TiO_x/PtO_y electrodes. Proceedings of the 2nd International Conference of Young Scientists CCT-2011, Lviv, Ukraine, November 24-26 2011, 218-219.
30. **O. Kasian**, The complex formation in the Cr(III)-carbamide system. Proceedings of the 1st International Conference of Young Scientists CCT-2010, Lviv, Ukraine, November 25-27 2010, 120-121.

Invited and seminar talks:

1. **Olga Kasian**. Green Hydrogen for the win? (Re)Shaping our energy transition. Working Lunch for Science Attachés at the Berlin-based embassies, 12.10.2022, Berlin.
2. **Olga Kasian**. Green Hydrogen for our sustainable future. Science lunch for Bundestag Staffers 2022, 17.11.2022, Berlin.
3. **Olga Kasian**. Stability Limitations in Oxygen Electrocatalysts: From Atomic-Scale Understanding to Design of Advanced Catalyst Materials. Challenges on the Renewable Energy Storage 2022, 29- 31.08.2022, Zámek Liblice, Czech Republic.
4. **Olga Kasian**. Hydrogen: water splitting from atomic scale understanding to design of advanced electrocatalyst materials for real application. FVEE-Jahrestagung 2020, 2-4.11.2020.
5. **Olga Kasian**. From Atomic-Scale Understanding to Design of Advanced Electrocatalyst Materials, PRiME 2020 (ECS, ECSJ, & KECS Joint Meeting) 4-9.10, 2020.
6. **Olga Kasian**. Correlating Atomic Level Structure of Electrocatalyst Material with Reaction Mechanisms. Symposium IRIS 2019, IRIS Adlershof, Humboldt-Universität zu Berlin, Berlin, 24.10.2019.
7. **Olga Kasian**. Correlating Atomic Scale Structure with Reaction Mechanisms: Electrocatalytic Evolution of Oxygen. 70th Annual Meeting of the International Society of Electrochemistry, Durban, South Africa, 04-09.08.2019
8. **Olga Kasian**. Tuning atomic scale structure of materials to enhance their catalytic performance in energy conversion and storage applications. Lecture at WW Department

Summer Colloquium, Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen, Germany,
18.07.2019

9. **Olga Kasian.** Towards understanding of complex degradation mechanisms in electrocatalysis. Lecture at the Seminar series of the Collaborative Research Centre (SFB) 953 «Synthetic Carbon Allotropes», Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen, Germany, 16.11.2018
10. **Olga Kasian.** Dynamic transformation of Iridium surfaces under the oxygen evolution conditions, International Symposium on Electrocatalysis, Szczyrk, Poland, 31.08.2018
11. **Olga Kasian.** Correlating the atomic scale structure of a catalyst with a mechanism of electrocatalytic reaction. Seminar Lecture at Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Erlangen, Germany, 20.07.2018
12. **Olga Kasian.** Oxygen evolution catalysis in electrochemical applications: challenges in the selectivity, activity and stability of the catalysts. Seminar Lecture at Helmholtz Zentrum Berlin, Berlin, Germany, 28.02.2018
13. **Olga Kasian.** On the mechanism of iridium dissolution during the oxygen evolution reaction. Lecture at 7th IEA ANNEX 30 Electrolysis Workshop at 3M, Saint Paul, Minnesota, USA, 10.10.2017

Book chapter:

1. A.V. Kravchenko, **O.I. Kasian**, V.S. Kublanovsky, Chast' II. Sovmestchennyye processy sinteza polioksidov vodoroda i rekuperatsii zagryazneniy iz zhidkih sred v neravnovesnoy nizektemperaturnoy plazme (in Russian) [Chapter II. Combined processes of synthesis of hydrogen polyoxides and recuperation of pollutants from liquid media with nonequilibrium low temperature plasma]. In: Ecologically friendly oxygen containing oxidants and their role in human protection from anthropogenic and biological pollution, Eds. Stus, V.P., Kravchenko, A.V., Kublanovsky, V.S., Velichenko, A.B. Dnipropetrovsk. OOO "Actcent PP". 2012, 331 pp. ISBN 978-966-260-758-1.