Detailed publication list

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190. R. Félix*, W. Witte, D. Hariskos, S. Paetel, M. Powalla, L. Weinhardt, M. Blum, C. Heske, M. Lozac'h, S. Ueda, M. Sumiya, H. Yoshikawa, K. Kobayashi, W. Yang, R.G. Wilks and M. Bär, *Near-surface composition profile in high-performance Cu(In,Ga)Se_2 thin-film solar cell absorbers and its impact on their electronic properties*, 6th International Conference on Hard X-ray Photoelectron Spectroscopy, Hsinchu, Taiwan, March 30 – April 3, 2015. *(talk)*

189. X.X. Liao*, A.R. Jeong, R.G. Wilks, E. Handick, L.Köhler, Y.F. Zhang, M. Gorgoi, J.C. Zheng, M. Rusu, and M. Bär, *Annealing induced reduction of MoO_3 thin films in-situ monitored by hard x-rays*, 6th International Conference on Hard X-ray Photoelectron Spectroscopy, Hsinchu, Taiwan, March 30 – April 3, 2015. *(poster)*

188. M. Bär, G. Sadoughi, D.E. Starr*, E. Handick, M. Gorgoi, R.G. Wilks, H. Snaith, *Mixed-Halide Perovskites: Where does the Chlorine go?*, Fall Meeting of the Materials Research Society, Boston, MA, U.S.A., Nov. 30 – Dec. 5, 2014. *(talk)*

187. R. Félix*, W. Witte, D. Hariskos, S. Paetel, M. Powalla, L. Weinhardt, M. Blum, C. Heske, M. Lozac'h, S. Ueda, M. Sumiya, H. Yoshikawa, K. Kobayashi, W. Yang, R.G. Wilks, and M. Bär, *Near-surface composition profile in high-performance Cu(In,Ga)Se_2 thin-film solar cell absorbers and its impact on their electronic properties*, BESSY II – Tender X-ray Workshop, Berlin, Germany, Dec. 1-2, 2014. *(poster)*

186. T. Xiao*, L. Köhler*, H. Scherg-Kurmes, S. Körner, T. Ericson, T. Törndahl, J. Scragg, J.H. Alsmeier, E. Handick, X. Kozina, M. Gorgoi, E. Ikenaga, R.G. Wilks, C. Platzer-Björkman, B. Szyszka, and M. Bär, *Metal oxide compounds in thin-film solar cell structures illuminated by tender x-rays*, BESSY II – Tender X-ray Workshop, Berlin, Germany, Dec. 1-2, 2014. *(poster)*

185. X.X. Liao*, A.R. Jeong, R.G. Wilks, E. Handick, L. Köhler, Y.F. Zhang, M. Gorgoi, J.C. Zheng, M. Rusu, and M. Bär, *Annealing induced reduction of MoO_3 thin films in-situ monitored by tender x-rays*, BESSY II – Tender X-ray Workshop, Berlin, Germany, Dec. 1-2, 2014. *(poster)*

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183. L. Köhler*, I. Repins, J.H. Alsmeier, R.G. Wilks, and M. Bär, *Impact of physical and chemical surface treatments on the kesterite surface structure*, 5th European Kesterite Workshop, Tallinn, Estonia, Nov. 13-14, 2014. *(talk)*

182. L. Köhler*, I. Repins, J.H. Alsmeier, R.G. Wilks, and M. Bär, *Impact of physical and chemical surface treatments on the kesterite surface structure*, 29th European Photovoltaic Solar Energy Conference, Amsterdam, The Netherlands, Sept. 22-26, 2014. *(poster)*

181. Y. Zhang*, A. Steigert, N. Lin, R.G. Wilks, and M. Bär, *The ZnO/SiC interface: An x-ray photoelectron spectroscopy study*, Annual Meeting of the Chinese Physical Society, Harbin, P.R. China, Sept. 11 – 14, 2014. *(poster)*

180. F. Meyer*, L. Weinhardt, A. Benkert, M. Blum, M. Bär, R.G. Wilks, D. Hauschild, W. Yang, C. Heske, and F. Reinert, *Non-equivalent carbon atoms in the resonant inelastic soft x-ray scattering map of cysteine*, International Workshop on Photoionization and Resonant Inelastic X-Ray Scattering (IWP & RIXS 2014), Erice, Italy, August 26 – September 1, 2014. *(poster)*

179. A. Benkert*, F. Meyer, M. Blum, R. G. Wilks, D. Hauschild, W. Yang, M. Bär, F. Reinert, C. Heske, and L. Weinhardt, *Resonant inelastic soft x-ray scattering map of gas-phase H_2O and D_2O*, International Workshop on Photoionization and Resonant Inelastic X-Ray Scattering (IWP & RIXS 2014), Erice, Italy, August 26 – September 1, 2014. *(poster)*

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177. M. Bär*, G. Sadoughi, E. Handick, D.E. Starr, M. Gorgoi, R.G. Wilks, H.J. Snaith, *Insights into the chemical and electronic structure of the TiO_2/SnO_2:F interface – the backbone of organometal halide perovskite and dye-sensitized solar cells*, 20th International Conference on Conversion and Storage of Solar Energy (IPS-20), Berlin, Germany, July 27 – August 1, 2014. *(talk)*

176. M. Bär*, *Photovoltaic materials research with electron and x-ray spectroscopies*, IPS-20 Workshop on Synchrotron Techniques for Photochemical Energy Conversion, Berlin, Germany, July 27, 2014. *(invited talk)*

175. K. Lips*, D.E. Starr, M. Bär, T. Schulze, F. Fenske, S. Christiansen, G. Reichardt, F. Schäfers, S. Hendel, R. Follath, J. Bahrdt, M. Scheer, G. Wüstefeld, P. Kuske, M. Hävecker, A. Knop-Gericke, R. Schlögl, B. Rech, *EMIL: The Energy Materials In-Situ Laboratory Berlin*, 40th IEEE Photovoltaic Specialists Conference, Denver, CO, USA, June 8-13, 2014. *(poster)*

174. D.A. Hanks*, P.S. Kobyakov, S.G. Rosenberg, J.-H. Alsmeier, M. Blum, R.G. Wilks, L. Weinhardt, M. Bär, W. Sampath, C. Heske, *Band alignment at the buried CdS/SnO_2:F interface in CdTe thin-film solar cells*, Spring Meeting of the European Materials Research Society, Lille, France, May 26-30, 2014. *(talk)*

173. M. Bär*, D. Gerlach, M. Wimmer, R.G. Wilks, L. Weinhardt, R. Félix, F. Ruske, K. Lips, J. Hüpkes, M. Blum, C. Lupulescu, F. Kronast, M. Gorgoi, W. Yang, C. Heske, W. Eberhardt, and B. Rech, *Buried interfaces in thin-film silicon solar cells as revealed by soft and hard x-rays*, Spring Meeting of the European Materials Research Society, Lille, France, May 26-30, 2014. *(poster)*

172. I.L. Repins*, J.V. Li, A. Kanevce, C. Perkins, K.X. Steirer, J. Pankow, G. Teeter, M. Bär, J.H. Alsmeier, L. Weinhardt, D.A. Hanks, R.G. Wilks, C. Heske, D. Kuciauskas, C. Beall, C. Dehart, J. Carapella, B. Bob, J.S. Park, S.H. Wei, *Effects of deposition termination on CZTSe device characteristics*, Spring Meeting of the European Materials Research Society, Lille, France, May 26-30, 2014. *(talk)*

171. J.H. Alsmeier*, I. Repins, L. Mansfield, L. Korte, R.G. Wilks, R. Noufi, and M. Bär, *Direct observation of band tails – a comparative study of chalcopyrite and kesterite absorbers*, Spring Meeting of the European Materials Research Society, Lille, France, May 26-30, 2014. *(talk)*

170. D.E. Starr*, G. Sadoughi, E. Handick, R.G. Wilks, J.-H. Alsmeier, L. Köhler, M. Gorgoi, S. Raoux, H. Snaith, and M. Bär, *"In-depth" analysis of the chemical and electronic surface structure of $CH_3NH_3PbI_{3-x}Cl_x$ perovskite solar cell absorbers using photoelectron spectroscopy*, Spring Meeting of the European Materials Research Society, Lille, France, May 26-30, 2014. *(talk)*

169. M. Bär*, B.-A. Schubert, I. Repins, B. Marsen, J.-H. Alsmeier, M. Blum, S. Krause, S. Pookpanratana, D.A. Hanks, Y. Zhang, W. Yang, T. Unold, L. Weinhardt, R.G. Wilks, C. Heske, R. Noufi, and H.-W. Schock, *Kesterite light absorbers illuminated by soft x-rays*, 562. WE-Heraeus-Seminar: From Sunlight to Fuels - Novel Materials and Processes for Photovoltaic and (Photo)Catalytic Applications, Bad Honnef, Germany, May 12-16, 2014 *(poster)*

168. E. Handick*, G. Sadoughi, D.E. Starr, R.G. Wilks, M. Blum, F. Meyer, A. Benkert, W. Yang, L. Weinhardt, C. Heske, H. Snaith, and M. Bär, *Correlating the chemical and electronic structure of the surface and near-surface bulk region of $CH_3NH_3PbI_{3-x}Cl_x$ perovskite solar cell absorbers*, 6th International Conference on Hybrid and Organic Photovoltaics (HOPV-14), Lausanne, Switzerland, May 11-14, 2014. *(poster)*

167. E. Handick*, D.E. Starr, R.G. Wilks, M. Blum, F. Meyer, K. Lips, W. Yang, L. Weinhardt, C. Heske, and M. Bär, *Chemical and electronic surface structure of perovskite-based solar cell absorbers investigated with X-ray spectroscopies*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 21-25, 2014. *(talk)*

166. L. Köhler*, E. Handick*, J.H. Alsmeier*, P. Yang*, P. Reinhard, S. Buecheler, N.J. Carter, I. Kobayashi, I. Repins, L. Mansfield, R. Noufi, L. Korte, A.N. Tiwari, R. Agrawal, T. Nakada, R.G. Wilks, and M. Bär, *CIGSe and CZTSe solar cells investigated by electron spectroscopy*, 5th International Workshop on CIGS solar cell technology, Berlin, Germany, April 2-3, 2014. *(poster)*

165. Y. Jeychandran*, F. Meyer, A. Benkert, M. Bär, R. Wilks, M. Blum, W. Yang, F. Reinert, C. Heske, L. Weinhardt, and M. Zharnikov, *X-ray spectroscopic analysis of the electronic structure of aqueous salt solutions*, 2014 Spring Meeting, German Physical Society (DPG), Berlin, Germany, March 15 – 20, 2014. *(talk)*

164. M. Bär*, I. Repins, J.-H. Alsmeier, L. Weinhardt, D.A. Hanks, R.G. Wilks, R. Noufi, and C. Heske, *The electronic band alignment at the CdS/$Cu_2ZnSnSe_4$ thin-film solar cell interface*, Fall Meeting of the Materials Research Society, Boston, MA, USA, Dec. 1-6, 2013. *(talk)*

163. D.A. Hanks*, P.S. Kobyakov, S. Alexander, J.-H. Alsmeier, K. Horsley, M. Haeming, M. Blum, R.G. Wilks, L. Weinhardt, M. Bär, C. Heske, *Characterization of the buried CdS/SnO_2:F interface in CdTe thin-film solar cells*, Fall Meeting of the Materials Research Society, Boston, MA, USA, Dec. 1-6, 2013. *(talk)*

162. L. Köhler*, N.J. Carter, J.H. Alsmeier, R.G. Wilks, R. Agrawal, and M. Bär, *Surface composition of polished CZTSSe absorbers as derived by XPS*, 4th European Kesterite Workshop, Berlin, Germany, Nov. 21-22, 2013. *(poster)*

161. J.H. Alsmeier*, I. Repins, L. Mansfield, L. Korte, R.G. Wilks, R. Noufi, and M. Bär, *Direct Observation of Band Tails – a Comparative Study of CIGSe and CZTSe Absorbers*, 4th European Kesterite Workshop, Berlin, Germany, Nov. 21-22, 2013. *(talk)*

160. R.G. Wilks*, J.J. Scragg, C. Platzer-Björkmann, D.E. Starr, J.H. Alsmeier, M. Blum, L. Weinhardt, W. Yang, M. Gorgoi, X. Kozina, E. Ikenaga, C. Heske, and M. Bär, *MoS_2 formation at the Mo/CZTS interface induced by thermal processing in a S-free atmosphere*, 4th European Kesterite Workshop, Berlin, Germany, Nov. 21-22, 2013. *(talk)*

159. R.G. Wilks*, M. Wimmer, D. Gerlach, R. Félix, F. Ruske, K. Lips, M. Gorgoi, M. Blum, W. Yang, L. Weinhardt, B. Rech, C. Heske, M. Bär, *Dopant Activation and Diffusion During Solid-Phase Crystallization of Thin-Film Silicon Solar Cell Structures*, 23rd International Photovoltaic Science and Engineering Conference, Taipei, Taiwan, Oct. 28 – Nov. 1, 2013. *(poster)*

158. H. Döscher*, T.G. Deutsch, J.F. Geisz, M.G. Weir, S.L. Alexander, M. Blum, L. Weinhardt, F. Meyer, W. Yang, M. Bär, H. Wang, A. Dameron, R.M. France, C. Heske, and J. A. Turner, *Solar hydrogen production with epitaxial III-V tandem absorber structures*, 224th ECS Meeting, San Francisco, CA, USA, Oct. 27 – Nov. 1, 2013. *(talk)*

157. M. Bär*, I. Repins, J.-H. Alsmeier, L. Weinhardt, W. Yang, R.G. Wilks, R. Noufi, and C. Heske, *Chemical interaction at the CdS/$Cu_2ZnSnSe_4$ thin-film solar cell interface*, 28th European Photovoltaic Solar Energy Conference, Paris, France, Sept. 30 – Oct. 4, 2013. *(talk)*

156. M. Bär*, N. Barreau, F. Couzinié-Devy, L. Weinhardt, R.G. Wilks, J. Kessler, and C. Heske, *Insights into the electronic structure of the heavily intermixed In_2S_3/Cu(In,Ga)Se_2 thin-film solar cell interface*, 39th IEEE Photovoltaic Specialists Conference, Tampa, FL, USA, June 16-21, 2013. *(talk)*

155. D.E. Starr*, M. Bär, T.F. Schulze, G. Reichardt, M. Hävecker, A. Knop-Gericke, I. Lauermann, R. Schlögl, B. Rech, K. Lips, *In-system and In-situ Investigation of Energy Materials Using Soft and Hard X-rays at the Energy Materials In-situ Laboratory Berlin (EMIL) at BESSY II*, 5th International conference on hard X-ray photoelectron spectroscopy, Uppsala, Sweden, June 17-20, 2013. *(talk)*

154. R.G. Wilks*, J.T. Sullivan, L. Weinhardt, M.T. Winkler, D. Recht, A.J. Said, B.K. Newman, M. Lozac'h, S. Ueda, H. Yoshikawa, M. Sumiya, K. Kobayashi, M.J. Aziz, T. Buonassisi, C. Heske, and M. Bär, *S defect derived above-valence band states in hyperdoped crystalline Si*, 5th International conference on hard X-ray photoelectron spectroscopy, Uppsala, Sweden, June 17-20, 2013. *(talk)*

153. M. Bär*, L. Weinhardt, and C. Heske, *Solar energy materials research using soft x-rays*, International Exploratory Workshop: Soft X-rays, Electrochemistry, Energy Materials, EMPA, Zurich, Switzerland, June 3-5, 2013. *(invited talk)*

152. L. Weinhardt*, D. Kreikemeyer-Lorenzo, K. George, S. Pookpanratana, M.G. Weir, M. Blum, M. Bär, B. Cole, B. Marsen, N. Gaillard, E.L. Miller, K.-S. Ahn, S. Shet, Y. Yan, M. Al-Jassim, W. Yang, J.D. Denlinger, and C. Heske, *Electron and (in-situ) soft x-ray spectroscopy of materials for photoelectrochemical water splitting*, 2nd International Conference on Materials for Energy, Karlsruhe, Germany, May 12-16, 2013. *(talk)*

151. M. Mezher*, K. Horsley, D.A. Hanks, M.G. Weir, T. Hofmann, W. Yang, M. Bär, L. Weinhardt, K. Ramanathan, M. Contreras, R. Noufi, and C. Heske, *Chemical and electronic structure of In-terminated Cu(In,Ga)Se_2 thin film surfaces*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(talk)*

150. M.G. Weir*, K.E.N. George, S. L. Alexander, T. Deutsch, A. Welch, D.A. Hanks, T. Hofmann, M. Ren, R.G. Wilks, F. Meyer, A. Benkert, W. Yang, L. Weinhardt, M. Bär, J.A. Turner, and C. Heske, *Electronic and chemical structure of photoelectrochemical surfaces: N-treated $GaInP_2$,* Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(talk)*

149. K. Horsley*, V. Depredurand, R. G. Wilks, M. G. Weir, S. L. Alexander, T. Hofmann, R. Felix, D. Gerlach, M. Blum, L. Weinhardt, M. Bär, S. Siebentritt, and C. Heske, *Comparison of the surface and near-surface bulk properties of Cu-poor and Cu-rich prepared $CuInSe_2$ thin-film solar cell absorbers*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(talk)*

148. D.A. Hanks*, J. Kephart, K. Horsley, L. Weinhardt, R.G. Wilks, M.G. Weir, T. Hofmann, W. Yang, M. Bär, W. Sampath, and C. Heske, *Surface and near-surface bulk chemical and electronic structure of optically highly-transmissive Cd(S,SO_4) buffer layers for CdTe solar cells*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(talk)*

147. D. Hauschild*, E. Handick, S. Pohlner, R. Lechner, J. Palm, M. Blum, W. Yang, R.G. Wilks, M. Bär, C. Heske, L. Weinhardt, F. Reinert, *Chemical and electronic structure of the In_2S_3/CIGSSe interface*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(poster)*

146. D. Gerlach*, C. Becker, R.G. Wilks, D. Abou-Ras, M. Wimmer, T. Sontheimer, J.J. Merkel, M. Blum, L. Weinhardt, W. Yang, C. Heske, B. Rech, and M. Bär, *"Amorphous" intergrain regions in polycrystalline silicon thin-film solar cell absorbers*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(talk)*

145. M. Bär*, *Surface and interface structure of thin-film solar cell absorbers: Kesterites vs. chalcopyrites – Close cousins or distant relatives?*, Spring Meeting of the Materials Research Society, San Francisco, CA, USA, April 1-5, 2013. *(invited talk)*

144. F. Meyer*, A. Benkert, N. Sankaranarayanan, M. Bär, R. Wilks, W. Yang, M. Zharnikov, C. Heske, L. Weinhardt, F. Reinert, *Probing the electronic structure of Proline in aquous solution by soft RIXS*, DPG-Frühjahrstagung, Regensburg, Germany, March 10-15, 2013. *(talk)*

143. A. Benkert*, F. Meyer, M. Blum, M. Bär, R.G. Wilks, W. Yang, F. Reinert, C. Heske, and L. Weinhardt, *Probing the electronic structure of gas phase methanol by soft RIXS*, DPG-Frühjahrstagung, Regensburg, Germany, March 10-15, 2013. *(talk)*

142. S. Nagarajan*, F. Meyer, A. Benkert, M. Bär, R. Wilks, W. Yang, F. Reinert, C. Heske, L. Weinhardt, and M. Zharnikov, *Probing the electronic structure of salt solutions by resonant inelastic soft X-ray scattering*, DPG-Frühjahrstagung, Regensburg, Germany, March 10-15, 2013. *(talk)*

141. M. Bär*, *The chemical and electronic structure of kesterite thin-film solar cell absorbers as revealed by soft x-rays*, 9th Workshop on the Future Direction of Photovoltaics, Tokyo, Japan, March 7-8, 2013. *(invited talk)*

140. I.C. Tran*, M. Bagge-Hansen, T. M. Willey, J. R. I Lee, L. Weinhardt, M. Bär, C. Heske and T. van Buuren, *Combustion soot-derived carbon nanostructures: Microscopic and spectroscopic investigations*, Fall Meeting of the Materials Research Society, Boston, MA, USA, Nov. 25-30, 2012. *(poster)*

139. M. Bär*, *Cu_2ZnSnS_4 thin-film solar cell absorbers illuminated by soft x-rays*, 3rd European Kesterite Workshop, Luxembourg, Nov. 22-23, 2012. *(invited talk)*

138. M.G. Weir*, K.E. George, T.G. Deutsch, A. Welch, R.G. Wilks, D.C. Hanks, M. Blum, W. Yang, M. Bär, L.

Weinhardt, J.A. Turner, and C. Heske, *Impact of nitrogen treatment on the electronic and chemical structure of $GaInP_2$ thin-film surfaces*, PRiME 2012 – Pacific Rim Meeting on Electrochemical and Solid-State Science 2012, Honolulu, HI, USA, 7.-12.10.2012. *(poster)*

137. T.G. Deutsch*, A. Welch, M. Bär, L. Weinhardt, M. Weir, K.E. George, C. Heske, J.A. Turner, *Photoelectrolysis on $GaInP_2$: Extended durability by nitrogen ion implantation*, PRiME 2012 – Pacific Rim Meeting on Electrochemical and Solid-State Science 2012, Honolulu, HI, USA, Oct. 7-12, 2012. *(talk)*

136. M. Bär*, R. Félix, J. Klaer, A. Weber, O. Zander, H. Rodriguez-Alvarez, B.-A. Schubert, I. Lauermann, R. Mainz, R.G. Wilks, L. Weinhardt, C. Heske, and H.-W. Schock, *Tailoring the chemical and electronic (surface) structure of $CuInS_2$ thin-film solar cell absorbers by Se-treatments*, 27th European Photovoltaic Solar Energy Conference, Frankfurt, Germany, Sept. 24-28, 2012. *(poster)*

135. J.H. Alsmeier*, R.G. Wilks, C. Hages, D. Gerlach, R. Félix, L. Weinhardt, M. Blum, W. Yang, C. Heske, R. Agrawal, and M. Bär, *$Cu_2ZnSn(S,Se)_4$ thin-film solar cell absorbers prepared from nanocrystal inks: Impact of Ge incorporation on the chemical and electronic structure*, MSE 2012 – Materials Science Engineering, Darmstadt, Germany, Sept. 25-27, 2012. *(talk)*

134. F. Meyer*, L. Weinhardt, M. Blum, R.G. Wilks, W. Yang, M. Bär, C. Heske, and F. Reinert, *"Building block" principle for analyzing the electronic structure of amino acids by resonant inelastic x-ray scattering*, 12th ICESS – International Conference on Electronic Spectroscopy and Structure, Saint-Malo, France, Sept. 16-21, 2012. *(poster)*

133. A. Benkert*, L. Weinhardt, F. Meyer, M. Blum, R.G. Wilks, W. Yang, M. Bär, F. Reinert, and C. Heske, *Probing the electronic structure of methanol using resonant inelastic soft x-ray scattering*, 12th ICESS – International Conference on Electronic Spectroscopy and Structure, Saint-Malo, France, Sept. 16-21, 2012. *(poster)*

132. L. Weinhardt*, A. Benkert, F. Meyer, M. Blum, R.G. Wilks, W. Yang, M. Bär, F. Reinert, and C. Heske, *Resonant inelastic soft x-ray scattering map of gas-phase water and what it tells about liquid water*, 12th ICESS – International Conference on Electronic Spectroscopy and Structure, Saint-Malo, France, Sept. 16-21, 2012. *(talk)*

131. R. Félix*, A. Weber, O. Zander, H. Rodriguez-Alvarez, B.-A. Schubert, J. Klaer, R.G. Wilks, R. Mainz, H.-W. Schock, and M. Bär, *Surface selenization of $CuInS_2$ thin-film solar cell absorbers by rapid thermal processing*, EMR 2012 – The Energy & Materials Research Conference, Torremolinos, Malaga, Spain, June 20-22, 2012. *(talk)*

130. D. Gerlach*, D. Wippler, R.G. Wilks, M. Wimmer, M. Lozac'h, R. Félix, S. Ueda, H. Yoshikawa, K. Lips, B. Rech, M. Sumiya, K. Kobayashi, M. Gorgoi, J. Hüpkes, and M. Bär, *Electronic structure of the p-type amorphous and microcrystalline Si:C:H/ZnO:Al interface*, 38th IEEE Photovoltaic Specialists Conference, Austin, TX, USA, June 3-8, 2012. *(talk)*

129. M. Bär*, J. Klaer, R. Félix, N. Barreau, L. Weinhardt, R.G. Wilks, C. Heske, and H.-W. Schock, *Surface Off-Stoichiometry of $CuInS_2$ Thin-Film Solar Cell Absorbers: Effect on the electronic surface structure*, 38th IEEE Photovoltaic Specialists Conference, Austin, TX, USA, 3.-8.6.2012. *(talk)*

128. R.G. Wilks*, R. Caballero, X. Song, R. Félix, A. Benkert, D. Gerlach, L. Weinhardt, M. Blum, W. Yang, C.A. Kaufmann, C. Heske, H.-W. Schock, and M. Bär, *X-ray spectroscopic analysis of the growth of CBD-CdS buffers on flexible Cu(In,Ga)Se_2 thin-film solar cell structures*, 38th IEEE Photovoltaic Specialists Conference, Austin, TX, USA, 3.-8.6.2012. *(talk)*

127. D. Hanks*, M. Weir, K. Horsley, T. Hofmann, L. Weinhardt, M. Bär, K. Barricklow, P. Kobyakov, W. Sampath, and C. Heske, *Photoemission study of CdTe surfaces after low-energy ion treatments*, 38th IEEE Photovoltaic Specialists Conference, Austin, TX, USA, June 3-8, 2012. *(poster)*

126. K. Horsley*, R.G. Wilks, D. Hanks, S. Pookpanratana, M. Blum, W. Yang, N. Paudel, A. Compaan, M. Bär, L.

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and Resonant Inelastic X-ray Scattering**,** Las Vegas, NV, USA, May 22-27, 2011. *(invited talk)*

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54. M. Bär*, *Surface and bulk analysis of hybrid perovskites by x-ray spectroscopies*, HyPerCells Retreat, Lübben, Germany, September 30 – October 2, 2015. *(talk)*

53. M. Bär*, *Photovoltaics: State-of-the-art technologies, current developments, and future directions*, International DAAD and BTU Alumni Seminar on "Development of a renewable energy technology market in developing countries – knowledge and technology transfer for utilization of solar energy", Cottbus, Germany, June 4-6, 2015. *(invited talk)*

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48. M. Bär*, *Duurzame Energie – Sustainable Energy*, Group Seminar, Department of Industrial Technology and Construction, University of Ghent, Ghent, Belgium Aug. 13, 2014. *(invited talk)*

47. R.G. Wilks* and M. Bär*, *Thin-film photovoltaic materials illuminated by soft and hard x-rays*, Seminar, Research Center for Photovoltaic Technologies National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, July 11, 2014. *(invited talk)*

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44. R. Rößler*, L. Korte, R. G. Wilks, D. E. Starr, J.-H. Alsmeier, M. Gorgoi, B. Rech, M. Bär, *Band alignment at the interface between transparent conductive oxides and p-doped amorphous silicon*, 5th Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, Dec. 4-6, 2013. *(poster)*

43. R.G. Wilks*, M. Wimmer, D. Gerlach, R. Félix, F. Ruske, K. Lips, M. Gorgoi, M. Blum, W. Yang, L. Weinhardt, B. Rech, C. Heske, M. Bär, *Dopant activation and diffusion during solid-phase crystallization of thin-film silicon solar cell structures*, 5th Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, Dec. 4-6, 2013. *(poster)*

42. D. Wippler*, D. Gerlach, S.J. van Albada, R.G. Wilks, B.E. Pieters, M. Wimmer, M. Gorgoi, J. Hüpkes, M. Bär, U. Rau, *Modeling of the impact of surface band bending on core level lines in HAXPES*, 5th Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, Dec. 4-6, 2013. *(poster)*

41. M. Bär, *Accelerating photovoltaic materials research through x-ray and electron spectroscopies*, Group Seminar, Photovoltaic Research Lab, Massachussets Insitute of Technology, Cambridge, MA, USA, Dec. 2, 2013. *(invited talk)*

40. D.E. Starr, G. Reichardt, M. Bär, I. Lauermann, T. Schulze*, J. Bahrdt, S. Hendel, F. Schäfers, M. Hävecker, A. Knop-Gericke, K. Lips, *EMIL The Energy Materials In-situ Laboratory: Tools for Energy Research*, Adlershofer Forschungsforum, Berlin, Germany, Nov. 12, 2013. *(poster)*

39. M. Bär*, *Thin-film PV Research @ HZB*, Group seminar, Aoyama-Gakuin-University, Fuchinobe, Japan, March 6, 2013. *(invited talk)*

38. M. Bär*, *Thin-film PV Research @ HZB*, Colloquium, International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan, March 5, 2013. *(invited talk)*

37. R.G. Wilks*, I. Repins, M.A. Contreras, R. Félix, J. Herrero-Albillos, L. Tati-Bismaths, F. Kronast, R. Nouf i, and M. Bär, *Intergrain variations of the chemical and electronic surface structure of polycrystalline Cu(In,Ga)Se_2 thin-film solar cell absorbers*, 4th Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, Dec. 12-14, 2012. *(poster)*

36. D.E. Starr*, I. Lauermann, R.G. Wilks, L. Weinhardt, G. Reichardt, C. Heske, B. Rech, K. Lips, and M. Bär, *The analytical tool chest of SISSY @ EMIL*, 4th Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, Dec. 12-14, 2012. *(poster)*

35. M. Bär*, *Quantitative XPS*, SOPHIA Workshop on analytical tools for PV, Helmholtz-Zentrum Berlin, Oct. 29 – Nov. 4, 2012. *(invited talk)*

34. M. Bär*, *The Si/ZnO interface illuminated by soft and hard x-rays*, FZJ-HZB Seminar, Hirschegg, Austria, Aug. 12-17, 2012. *(invited talk)*

33. M. Bär*, *Photovoltaics: State-of-the-art technologies, current developments, and future directions*, International DAAD-Summer School "Harnessing Renewable Energy for Industrial Applications and Other Productive Uses in Developing Countries", Cottbus, Germany, April 16-21, 2012. *(invited talk)*

32. M. Bär*, *Photovolatic materials research with x-ray spectroscopies (XES & HAXPES)*, Winterschool "Characterization of micro- and nano-materials", Cottbus, Germany, Feb. 13-16, 2012. *(invited talk)*

31. M. Wimmer*, M. Bär, D. Gerlach, R.G. Wilks, S. Scherf, C. Lupulescu, F. Ruske, R. Félix, J. Hüpkes, G. Gavrila, M. Gorgoi, K. Lips, W. Eberhardt, and B. Rech, *Thin-film polycrystalline silicon solar cell structures probed by hard x-ray photoelectron spectroscopy*, 3rd Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, November 2 – December 2, 2011. *(poster)*

30. F. Meyer*, L. Weinhardt, M. Blum, M. Bär, R.G. Wilks, W. Yang, C. Heske, F. Reinert, *The electronic structure of L-Cysteine in aqueous solution studied by soft x-rays*, 2011 Advanced Light Source User Meeting, Berkeley, CA, USA, October 3-5, 2011. *(poster)*

29. D. Gerlach*, M. Wimmer, R.G. Wilks, C. Becker, T.F. Schulze, M. Blum, L. Weinhardt, W. Yang, F. Ruske, K. Lips, C. Heske, B. Rech, and M. Bär, *Solid-phase crystallization of amorphous silicon thin-film solar cell absorbers studied by soft x-ray emission spectroscopy*, 2011 Advanced Light Source User Meeting, Berkeley, CA, USA, October 3-5, 2011. *(poster)*

28. M. Bär*, *Soft x-ray and electron spectroscopy II: X-ray emission and absorption*, Advanced Characterization Techniques Workshop, Helmholtz-Zentrum Berlin, April 7-8, 2011. *(invited talk)*

27. D. Gerlach, M. Wimmer, R. Félix, K. Lips, B. Rech, J. Herrero-Albillos, F. Kronast, R.G. Wilks*, M. Bär, J.P. Theissen, F. Erfurth, and L. Weinhardt, *Chemical micro-structure of interfaces in thin-film solar cells investigated by PEEM*, 2nd Joint BER II *and* BESSY II Users' Meeting, Berlin, Germany, December 9-10, 2010. *(poster)*

26. M. Bär*, *Experimental capabilities (of the YIG) at the Advanced Light Source*, Physikalisches Kolloquium, Brandenburgische Technische Universität Cottbus, Nov. 15, 2010. *(invited talk)*

25. M. Bär*, *Spectroscopic insights into thin-film photovoltaic materials*, "Energie-Woche", Brandenburgische Technische Universität Cottbus, Sept. 24, 2010. *(invited talk)*

24. M. Bär*, *Spectroscopic insights into thin-film photovoltaic materials*, Dept. of Chemistry Seminar, University of Nevada, Las Vegas, Las Vegas, NV, USA, July 7, 2010. *(invited talk)*

23. M. Bär*, *SISSY – Silicon in-situ spectroscopy with synchrotron radiation*, Meeting of the Scientific Advisory Board of the HZB, Berlin, April 19, 2010. *(invited talk)*

22. M. Bär*, *Thin-film photovoltaics illuminated by soft x-rays*, Seminar der Nachwuchsgruppenleiter, Forschungszentrum Dresden-Rossendorf, March 1, 2010. *(invited talk)*

21. R.G. Wilks, S. Pookpanratana, R. France, I. Repins, L. Tati Bismaths, R. Félix, M.A. Contreras, R. Noufi, T.D. Moustakas, C. Heske, F. Kronast, and M. Bär*, *PEEM investigation of the chemical microstructure of materials for optoelectronic applications*, First Joint BER II *and* BESSY II Users' Meeting, November 12-13, 2009. *(poster)*

20. M. Bär*, *Thin-film photovoltaics illuminated by soft x-rays*, Physikalisches Kolloquium, Universität Würzburg, October 30, 2009. *(invited talk)*

19. M. Bär*, *Thin-film photovoltaics illuminated by soft x-rays*, 2009 ALS-Molecular Foundry Joint Users' Meeting, Workshop: Soft X-Ray Spectroscopy in Renewable Energy Generation and Storage Materials, Berkeley, CA, USA, Oct. 15-17, 2009. (invited talk)

18. M. Bär*, *Surfaces and interfaces of chalcopyrite thin-film solar cells investigated by soft x-ray spectroscopies*, Project Meeting, Carl von Ossietzky Universität Oldenburg, March 4, 2009. *(invited talk)*

17. M. Bär*, *How soft x-ray spectrosocpies can help to improve thin film solar cells*, Berufungsvortrag, Brandenburgische Technische Universität Cottbus, Feb. 24, 2009. *(invited talk)*

16. M. Bär*, L. Weinhardt, C. Heske, B. Cole, B. Marsen, N. Gaillard, E. Miller, A. Kleimann, E. McFarland, J. Hu, F. Zhu, I. Matulionis, and A. Madan, *Electronic and chemical structure of PEC materials as derived by electron and soft x-ray spectroscopies*, SHGR-PEC Project Meeting, Phoenix, AZ, USA, May 19-20, 2008. *(invited talk)*

15. M. Bär*, *Bandoffset tailoring – a tool to improve thin film solar cells*, Physikalisches Kolloquium, Brandenburgische Technische Universität Cottbus, April 23, 2008. *(invited talk)*

14. M. Bär*, *Improving thin film solar cells by deliberate interface tailoring*, Auswahlsitzung Helmholtz-Gemeinschaft Berlin, Nov. 14, 2007. *(invited talk)*

13. L. Weinhardt*, O. Fuchs, M. Blum, M. Weigand, M. Bär, J.D. Denlinger, W. Yang, Z. Hussain, A. Fleszar, W. Hanke, E. Umbach, and C. Heske, *Resonant inelastic soft x-ray scattering maps*, Advanced Light Source User's Meeting, San Francisco, CA, USA, Oct. 4-6, 2007. *(poster)*

12. L. Weinhardt*, M. Blum, M. Bär, C. Heske, B. Cole, B. Marsen, and E. Miller, *Experiment-based electronic surface level positions of WO_3 thin films for photoelectrochemical hydrogen production*, SHGR-PEC Project Meeting, Golden, CO, USA, Sept. 24-25, 2007. *(invited talk)*

11. M. Bär*, L. Weinhardt, C. Heske, K.-S. Ahn, Y. Yan, and M. Al-Jassim, *Investigation of ZnO:N and ZnO:Cu thin films by electron and x-ray spectroscopies*, SHGR-PEC Project Meeting, Golden, CO, USA, Sept. 24-25, 2007. *(invited talk)*

10. M. Bär*, *Bandoffset tailoring – a tool to improve thin film solar cells*, Hahn-Meitner-Institut Berlin, May 19, 2007. *(invited talk)*

9. S. Pookpanratana*, M. Bär*, R. France, T. Moustakas and C. Heske, *Investigation of surfaces and interfaces in (In,Ga,Al)N-based structures used for LEDs*, Photonics Program Meeting, Las Vegas, NV, USA, March 2, 2007. *(invited talk)*

8. M. Bär*, L. Weinhardt, C. Heske, Y. Yan, and M. Al-Jassim, *Investigation of ZnO:N thin films by electron and x-ray spectroscopies*, PEC Program Meeting, Honolulu, HI, USA, Jan. 30-31, 2007. *(invited talk)*

7. M. Bär*, L. Weinhardt, C. Heske, O. Fuchs, E. Umbach, J. Klaer, H.-W. Schock, K. Ramanathan, R. Noufi, X. Liu, and A. Compaan, *X-ray emission spectroscopy of interfaces in thin film solar cell devices*, Advanced Light Source User's Meeting, San Francisco, CA, USA, Oct. 9-11, 2006. *(poster)*

6. M. Blum, M. Bär, L Weinhardt, and C. Heske*, *Characterization of the electronic and chemical structure at thin film solar cell interfaces*, DOE Solar Energy Technologies Program Review Meeting, Denver, CO, USA, Nov. 7-10, 2005. *(poster)*

5. M. Bär*, *Cd^{2+}/NH_3-Behandlung von $CuGaSe_2$ Dünnschichtsolarzellabsorbern - Ausbildung einer CdSe Oberflächenverbindung* and *ILGAR-Zn(O,OH) - Position des Valenzbandmaxi-mums vs. O/OH-Komposition*, Arbeitstagung zur Röntgenemissionsspektroskopie mit Synchrotronstrahlung, Universität Leipzig, April 29, 2005. *(invited talk)*

4. I.M. Kötschau*, M. Bär, P. Pistor, A. Grimm, I. Lauermann, M.Ch. Lux-Steiner, S. Sokoll, Ch.-H. Fischer, Ch. Jung, W. Gudat, L. Weinhardt, O. Fuchs, C. Heske, T.P. Niesen, S. Visbeck, F. Karg, *Quantification of x-ray emission and photoelectron spectra of layered polycrystalline thin film structures*, BESSY Users' meeting, Berlin, 2004. *(talk)*

3. M. Bär*, *$Cu(In,Ga)(S,Se)_2$ solar cells with ILGAR-ZnO Layers: Surface modification and 'window extension layer' concept*, Universität Würzburg, Würzburg, June 25, 2004. *(invited talk)*

2. M. Bär*, *$Cu(In,Ga)(S,Se)_2$ solar cells with ILGAR-ZnO: Surface modification and 'window extension layer' concept*, Energy Research Centre of the Netherlands, Petten, The Netherlands, April 25, 2004. *(invited talk)*

1. M. Bär*, *Die Cadmium-freie Dünnschicht-Solarzelle*, Fachhochschule für Technik und Wirtschaft Berlin, Berlin, Germany, March 2000. *(invited talk)*