

## Journal publications 2016

- L. Ahtapodov, A. M. Munshi, **J. S. Nilsen**, J. F. Reinertsen, D. L. Dheeraj, B. O. Fimland, **A. T. J. van Helvoort** and H. Weman, Effect of V/III ratio on the structural and optical properties of self-catalysed GaAs nanowires, *Nanotechnology*, **27**, 12, 2016.
- M. H. Balci, L. M. S. Aas, M. Kildemo, **R. Sæterli**, **R. Holmestad**, M. Lindgren, T. Grande and M. A. Einarsrud, White light emitting silicon nano-crystals-polymeric hybrid films prepared by single batch solution based method, *Thin Solid Films*, **603**, 126-133, 2016.
- M. E. M. Buan, N. Muthuswamy, **J. C. Walmsley**, D. Chen and M. Rønning, Nitrogen-doped carbon nanofibers on expanded graphite as oxygen reduction electrocatalysts, *Carbon*, **101**, 191-202, 2016.
- W. Chrominski, **S. Wenner**, **C. D. Marioara**, **R. Holmestad** and M. Lewandowska, Strengthening mechanisms in ultrafine grained Al-Mg-Si alloy processed by hydrostatic extrusion - Influence of ageing temperature, *Materials Science and Engineering a-Structural Materials Properties Microstructure and Processing*, **669**, 447-458, 2016.
- S. P. Cooil, **E. A. Mørtzell**, F. Mazzola, M. Jorge, **S. Wenner**, M. Edmonds, L. Thomsen, H. W. Klemm, G. Peschel, A. Fuhrich, M. Prieto, T. Schmidt, J. A. Miwa, **R. Holmestad** and J. W. Wells, Thermal migration of alloying agents in aluminium, *Materials Research Express*, **3**, 8, 2016.
- Q. Du, B. Holmedal, **J. Friis** and **C. D. Marioara**, Precipitation of Non-spherical Particles in Aluminum Alloys Part II: Numerical Simulation and Experimental Characterization During Aging Treatment of an Al-Mg-Si Alloy, *Metallurgical and Materials Transactions a-Physical Metallurgy and Materials Science*, **47A**, 589-599, 2016.
- X. Z. Duan, D. Wang, G. Qian, **J. C. Walmsley**, A. Holmen, D. Chen and X. G. Zhou, Fabrication of K-promoted iron/carbon nanotubes composite catalysts for the Fischer-Tropsch synthesis of lower olefins, *Journal of Energy Chemistry*, **25**, 311-317, 2016.
- V. T. Fauske**, **M. B. Erlbeck**, J. Huh, D. C. Kim, A. M. Munshi, D. L. Dheeraj, H. Weman, B. O. Fimland and **A. T. J. van Helvoort**, In situ electronic probing of semiconducting nanowires in an electron microscope, *Journal of Microscopy*, **262**, 183-188, 2016.
- V. T. Fauske**, J. Huh, G. Divitini, D. L. Dheeraj, A. M. Munshi, C. Ducati, H. Weman, B.-O. Fimland and **A. T. J. van Helvoort**, In Situ Heat-Induced Replacement of GaAs Nanowires by Au, *Nano Letters*, **16**, 3051-3057, 2016.
- I. Hallsteinsen, M. Moreau, A. Grutter, **M. Nord**, **P. E. Vullum**, D. A. Gilbert, T. Bolstad, J. K. Grepstad, **R. Holmestad**, S. M. Selbach, A. T. N'Diaye, B. J. Kirby, E. Arenholz and T. Tybell, Concurrent magnetic and structural reconstructions at the interface of (111)-oriented  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{LaFeO}_3$ , *Physical Review B*, **94**, 6, 2016.
- I. Hallsteinsen, **M. Nord**, T. Bolstad, **P. E. Vullum**, J. E. Boschker, P. Longo, R. Takahashi, **R. Holmestad**, M. Lippmaa and T. Tybell, Effect of Polar (111)-Oriented  $\text{SrTiO}_3$  on Initial Perovskite Growth, *Crystal Growth & Design*, **16**, 2357-2362, 2016.
- M. Heilmann, A. M. Munshi, G. Sarau, M. Gobelt, C. Tessarek, **V. T. Fauske**, **A. T. J. van Helvoort**, J. F. Yang, M. Latzel, B. Hoffmann, G. Conibeer, H. Weman and S. Christiansen, Vertically Oriented Growth of GaN Nanorods on Si Using Graphene as an Atomically Thin Buffer Layer, *Nano Letters*, **16**, 3524-3532, 2016.
- M. Khadyko, **C. D. Marioara**, I. G. Ringdalen, S. Dumoulin and O. S. Hopperstad, Deformation and strain localization in polycrystals with plastically heterogeneous grains, *International Journal of Plasticity*, **86**, 128-150, 2016.
- C. Kjoller, L. Sigalas, P. Frykman, **R. Bjørge** and M. Torsæter, R. Aarli, N. A. Rokke and H. F. Svendsen, Cement Self-healing as a Result of  $\text{CO}_2$  Leakage, *Energy Procedia*, **86**, 342-351, 2016.

- F. L. Lou, M. E. M. Buan, N. Muthuswamy, **J. C. Walmsley**, M. Rønning and D. Chen, One-step electrochemical synthesis of tunable nitrogen-doped graphene, *Journal of Materials Chemistry A*, **4**, 1233-1243, 2016.
- B. H. McDonagh, G. Singh, S. Hak, S. Bandyopadhyay, I. L. Augestad, D. Peddis, I. Sandvig, A. Sandvig and W. R. Glomm, L-DOPA-Coated Manganese Oxide Nanoparticles as Dual MRI Contrast Agents and Drug-Delivery Vehicles, *Small*, **12**, 301-306, 2016.
- M. Mihara, **C. D. Marioara**, **S. J. Andersen**, **R. Holmestad**, E. Kobayashi and T. Sato, Precipitation in an Al-Mg-Cu alloy and the effect of a low amount of Ag, *Materials Science and Engineering a-Structural Materials Properties Microstructure and Processing*, **658**, 91-98, 2016.
- E. A. Mørtzell**, **S. Wenner**, P. Longo, **S. J. Andersen**, **C. D. Marioara** and **R. Holmestad**, Elemental electron energy loss mapping of a precipitate in a multi-component aluminium alloy, *Micron*, **86**, 22-29, 2016.
- M. Nematollahi, X. D. Yang, **E. Seim**, **P. E. Vullum**, **R. Holmestad**, U. J. Gibson and T. W. Reenaas, Compositional and structural properties of pulsed laser-deposited ZnS:Cr films, *Applied Physics a-Materials Science & Processing*, **122**, 2016.
- M. Nord**, **P. E. Vullum**, I. Hallsteinsen, T. Tybell and **R. Holmestad**, Assessing electron beam sensitivity for SrTiO<sub>3</sub> and La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> using electron energy loss spectroscopy, *Ultramicroscopy*, **169**, 98-106, 2016.
- D. Nunes, T. R. Calmeiro, S. Nandy, J. V. Pinto, A. Pimentel, P. Barquinha, P. A. Carvalho, **J. C. Walmsley**, E. Fortunato and R. Martins, Charging effects and surface potential variations of Cu-based nanowires, *Thin Solid Films*, **601**, 45-53, 2016.
- X. K. Phan, **J. C. Walmsley**, H. Bakhtiary-Davijany, R. Myrstad, P. Pfeifer, H. Venvik and A. Holmen, Pd/CeO<sub>2</sub> catalysts as powder in a fixed-bed reactor and as coating in a stacked foil microreactor for the methanol synthesis, *Catalysis Today*, **273**, 25-33, 2016.
- J. M. Polfus, Z. A. Li, W. Xing, M. F. Sunding, **J. C. Walmsley**, M. L. Fontaine, P. P. Henriksen and R. Bredesen, Chemical stability and H<sub>2</sub> flux degradation of cercer membranes based on lanthanum tungstate and lanthanum chromite, *Journal of Membrane Science*, **503**, 42-47, 2016.
- D. D. Ren, D. L. Dheeraj, C. J. Jin, **J. S. Nilsen**, J. Huh, J. F. Reinertsen, A. M. Munshi, A. Gustafsson, **A. T. J. van Helvoort**, H. Weman and B. O. Fimland, New Insights into the Origins of Sb-Induced Effects on Self-Catalyzed GaAsSb Nanowire Arrays, *Nano Letters*, **16**, 1201-1209, 2016.
- T. Saito**, **F. J. H. Ehlers**, W. Lefebvre, D. Hernandez-Maldonado, **R. Bjørge**, **C. D. Marioara**, **S. J. Andersen**, **E. A. Mørtzell** and **R. Holmestad**, Cu atoms suppress misfit dislocations at the beta "/Al interface in Al-Mg-Si alloys, *Scripta Materialia*, **110**, 6-9, 2016.
- E. Undheim, K. E. Ekstrøm, L. Arnberg, **R. Holmestad** and M. Di Sabatino, The effect of holding time on the size distribution of  $\beta$ -Si<sub>3</sub>N<sub>4</sub> particles and nucleation undercooling in multicrystalline silicon, *Physica Status Solidi (C) Current Topics in Solid State Physics*, **13**, 822-826, 2016.
- A. M. Varambhia, L. Jones, A. De Backer, **V. T. Fauske**, S. Van Aert, D. Ozkaya and P. D. Nellist, Quantifying a Heterogeneous Ru Catalyst on Carbon Black Using ADF STEM, *Particle & Particle Systems Characterization*, **33**, 438-444, 2016.
- N. P. Wagner, **P. E. Vullum**, **M. K. Nord**, A. M. Svensson and F. Vullum-Bruer, Vanadium Substitution in Li<sub>2</sub>MnSiO<sub>4</sub>/C as Positive Electrode for Li Ion Batteries, *The Journal of Physical Chemistry C*, **120**, 11359-11371, 2016.
- L. Wang, K. Asheim, **P. E. Vullum**, A. M. Svensson and F. Vullum-Bruer, Sponge-Like Porous Manganese(II,III) Oxide as a Highly Efficient Cathode Material for Rechargeable Magnesium Ion Batteries, *Chemistry of Materials*, **28**, 6459-6470, 2016.

X. Wang, H. Zhou, F. Lou, Y. Li, M. E. M. Buan, X. Duan, **J. C. Walmsley**, E. Sheridan and D. Chen, Boosted Supercapacitive Energy with High Rate Capability of a Carbon Framework with Hierarchical Pore Structure in an Ionic Liquid, *ChemSusChem*, **9**, 3093-3101, 2016.

X. H. Wang, H. T. Zhou, E. Sheridan, **J. C. Walmsley**, D. D. Ren and D. Chen, Geometrically confined favourable ion packing for high gravimetric capacitance in carbon-ionic liquid supercapacitors, *Energy & Environmental Science*, **9**, 232-239, 2016.

**S. Wenner**, **J. Friis**, **C. D. Marioara** and **R. Holmestad**, Precipitation in a mixed Al–Cu–Mg/Al–Zn–Mg alloy system, *Journal of Alloys and Compounds*, **684**, 195-200, 2016.

**S. Wenner** and **R. Holmestad**, Accurately measured precipitate-matrix misfit in an Al-Mg-Si alloy by electron microscopy, *Scripta Materialia*, **118**, 5-8, 2016.

J. A. R. Wesmann and N. Espallargas, Elucidating the complex role of surface oxides formed during sliding of self-mated warm sprayed WC-CoCr in different environments, *Tribology International*, **94**, 360-372, 2016.

## Journal publications 2017, published online in 2016

K. Matsuda, A. Kawai, K. Watanabe, S. Lee, **C. D. Marioara**, **S. Wenner**, K. Nishimura, T. Matsuzaki, N. Nunomura, T. Sato, **R. Holmestad** and S. Ikeno, Extra Electron Diffraction Spots Caused by Fine Precipitates Formed at the Early Stage of Aging in Al-Mg-X (X=Si, Ge, Zn)-Cu Alloys, *Materials Transactions*, **58**, 167-175, 2017.

V. Arivazhagan, F. D. Schmitz, **P. E. Vullum**, **A. T. J. van Helvoort** and B. Holst, Atomic resolution imaging of beryl: an investigation of the nano-channel occupation. *Journal of Microscopy*, **265**, 245-250, 2017.

E. Balducci, L. Ceschini, S. Messieri, **S. Wenner** and **R. Holmestad**, Thermal stability of the lightweight 2099 Al-Cu-Li alloy: Tensile tests and microstructural investigations after overaging, *Materials and Design*, **119**, 54-64, 2017.

Q. Du, K. Tang, **C. D. Marioara**, **S. J. Andersen**, B. Holmedal, and **R. Holmestad**, Modeling over-aging in Al-Mg-Si alloys by a multi-phase CALPHAD-coupled Kampmann-Wagner Numerical model, *Acta Materialia*, **122**, 178-186, 2017.

**E. A. Mørtzell**, **C. D. Marioara**, **S. J. Andersen**, I. G. Ringdalen, **J. Friis**, **S. Wenner**, J. Røyset, O. Reiso and **R. Holmestad**, The effects and behaviour of Li and Cu alloying agents in lean Al-Mg-Si alloys, *Journal of Alloys and Compounds*, **699**, 235-242, 2017.

D. Wang, J. Ji, B. Chen, W. Chen, G. Qian, X. Duan, X. Zhou, A. Holmen, D. Chen and **J. Walmsley**, Novel Fe/MnK-CNTs nanocomposites as catalysts for direct production of lower olefins from syngas, *AIChE Journal*, **63**, 154-161, 2017.

## Conference contributions in 2016 (a selection)

**Bergh T**, Mogstad K, Watremetz B, Runde P, Wiik K, **van Helvoort A**. Transmission Electron Microscopy Characterization of Hot-Pressed Silicon Carbide with Boron and Carbon Additives. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Christiansen E**, **Marioara CD**, Hopperstad OS, **Holmestad R**. Subgrain-formation in precipitate free zones in aluminium alloys subjected uniaxial compression. Nasjonal konferanse for Materialteknologi 2016, 2016-08-24 - 2016-08-25, Trondheim, Norway.

**Christiansen E, Marioara CD, Hopperstad OS, Holmestad R.** Transmission Electron Microscopy of Precipitate Free Zones in Aluminium Alloys Subjected to Uniaxial Compression. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Christiansen E, Marioara CD, Hopperstad OS, Holmestad R.** Deformation induced subgrains in PFZs of AA6060 alloy subjected to uniaxial compression. Second INTPART Workshop between NTNU, University of Toyama and Tokyo Tech, 2016-10-12 - 2016-10-12, University of Toyama, Japan.

**Dahl PI, Rausseo LCC, Barnett A, Lomas S, Hanetho SM, Kvello JH, Hatlø J, Tolchard JR, Vullum PE, Mokkelbost, T.** Flame spray pyrolysis of nanostructured materials, Supported Pt cathode catalysts for PEM fuel cells. International workshop Nano2021 FOXCET, 2016-11-24 - 2016-11-25, Trondheim, Norway.

**Dahl PI, Rausseo LCC, Barnett A, Vullum PE, Mokkelbost T.** Pt catalyst supported on tin oxides by flame spray pyrolysis for PEM fuel cells. MRS Fall Meeting 2016, 2016-11-27 - 2016-12-03, Boston, US.

**Du Q, Tang K, Marioara CD, Andersen SJ, Holmedal B, Holmestad R.** Modeling over-ageing in Al-Mg-Si alloys by a multi-phase CALPHAD-coupled Kampmann-Wagner Numerical model. The 15th International Conference on Aluminum Alloys (ICAA15), 2016-06-12 - 2016-06-16, Chongqing, China.

**Fauske VT, Huh J, Divitini G, Dheeraj DL, Munshi AM, Ducati C, Fimland, BO, van Helvoort A.** In situ tracking of the heat-induced replacement of GaAs by Au in nanowires, European Microscopy Congress 2016, 2016-08-28 - 2016-09-02, Lyon, France.

**Fauske VT, Huh J, Divitini G, Dheeraj DL, Munshi AM, Ducati C, Fimland BO, van Helvoort A.** Metallic contacts within semiconductor nanowires. Nano@NTNU Workshop 2016, 2016-11-17 - 2016-11-18, Trondheim, Norway.

**Friis J, Jensen IJT, Ringdalen IG, Saai A, Marioara CD, Hopperstad OS.** Multi-scale modelling of crack initialisation at grain boundary precipitates in Al-Mg-Si alloys. eSSENCE 2016 - Multiscale Modelling of Materials and Molecules, 2016-06-07 - 2016-06-09, Uppsala, Sweden.

**Friis J, Ringdalen IG, Marioara CD, Wenner S, Andersen SJ, Holmestad R, Hopperstad OS, Khadyko M.** Precipitation and formation of precipitate free zones in aluminium alloys. Invited presentation at colloquium in the Dept. of Physics at University of Montreal, 2016-01-25, Montreal, Canada.

**Garmannslund A, Nilsen JS, van Helvoort A.**  $\zeta$ -factor Tilt Dependency for Improved Quantitative Microanalysis. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Hallsteinsen I, Moreau M, Grutter A, Nord MK, Vullum PE, Gilbert DA, Bolstad T, Grepstad J, Holmestad R, Selbach SM, N'diaye AT, Kirby B, Arenholz E, Tybell T.** Effect of structural reconstructions at the interface of (111)-oriented  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{LaFeO}_3$ . Material Research Society Fall Meeting, 2016-11-27 - 2016-12-02, Boston, US.

**Hallsteinsen I, Moreau M, Grutter A, Nord MK, Vullum PE, Gilbert DA, Bolstad T, Grepstad J, Holmestad R, Selbach SM, N'diaye AT, Kirby B, Arenholz E, Tybell T.** Induced ferromagnetism at the interface of complex oxides. Advanced Light Source user meeting, 2016-10-03 - 2016-10-04, Berkeley, US.

**van Helvoort A, Fauske VT, Huh J, Divitini G, Dheeraj DL, Munshi A, Ducati C, Weman H, Fimland BO.** The kinetics and dynamics of Au-GaAs solid state replacements, studied by in situ TEM. DENSSolutions pre SCANDEM Workshop, 2016-06-07, Trondheim, Norway.

**Holmestad R, Wenner S, Marioara CD, Mørtzell EA, Vullum PE, Andersen SJ.** 6xxx aluminium alloy development - aided by the double corrected ARM200CF. ARM Group User meeting, Glasgow University, 2016-06-14 - 2016-06-15, Glasgow, UK.

**Holmestad R, Wenner S, Mørtzell EA, Sunde JK, Marioara CD, Friis J, Andersen SA.** Precipitates in Al alloys across and between industrially common compositions. THERMEC, 2016-05-29 - 2016-06-03, Graz, Austria.

**Holmestad R.** Precipitates in age hardenable Al alloys studied by (S)TEM techniques. 2nd Forum of Ongoing Establishment of Centre for Advanced Materials Research and International Collaboration (CAMRIC-FORUM2), 2016-10-13 - 2016-10-14, Toyama, Japan.

**Johnstone DN, Krakow R, Wenner S, Holmestad R, van Helvoort A, Rae CMF, Midgley PA.** Crystallographic mapping in engineering alloys by scanning precession electron diffraction. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Mosberg AB, Ren D, Fimland BO, van Helvoort A.** FIB patterning for position-controlled nanowire growth. European Microscopy Congress 2016, 2016-08-28 - 2016-09-02, Lyon, France.

**Mosberg AB, Ren D, Fauske VT, Huh J, Fimland BO, van Helvoort A.** Focused Ion Beam for substrate nanopatterning and characterization of position-controlled Nanowires. 7th NanoNetwork workshop, 2016-06-13 - 2016-06-15, Trondheim, Norway.

**Mosberg AB, Ren D, Myklebost S, Fimland BO, van Helvoort A.** Tailoring nanowire growth through Focused Ion Beam patterning. Nano@NTNU workshop, 2016-11-17 - 2017-11-18, Trondheim, Norway (rewarded best student presentation prize).

**Mosberg AB, Ren D, Fauske VT, Casadei A, Boche K, Faivre V, Fimland BO, van Helvoort A.** In-Situ Electrical Probing of Nanowires on Focused Ion Beam Patterned Substrates. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Mørtzell EA, Andersen SJ, Marioara CD, Røyset J, Friis J, Holmestad R.** Characterization of multicomponent Al alloys by TEM, HAADF-STEM, EELS and DFT. European Microscopy Congress, 2016-08-28 - 2016-09-02, Lyon, France.

**Mørtzell EA, Marioara CD, Andersen SJ, Reiso O, Røyset J, Holmestad R.** The effect of Li additions on strength and precipitation in a lean Al 6xxx alloy. The 15th International Conference on Aluminum Alloys (ICAA15), 2016-06-12 - 2016-06-16, Chongqing, China.

**Mørtzell EA, Andersen SJ, Marioara CD, Holmestad R.** HAADF-STEM Analysis of Precipitates in Al-Mg-Si Alloys. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Nilsen JS, Huh J, Munshi A, Dheeraj DL, Fimland BO, Weman H, van Helvoort A.** Characterization of Pd/Ge/Au contacts on GaAs Nanowires. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Nilsen JS, Mosberg AB, Garmannslund A, Reinertsen JF, Munshi AM, Dheeraj DL, Fimland BO, Weman H, van Helvoort A.** Self-Induced Compositional Variations in GaAs/AlGaAs Core-Shell Nanowires. European Microscopy Congress 2016, 2016-08-28 - 2016-09-02, Lyon, France.

**Nilsen JS, Huh J, Munshi A, Dheeraj DL, Fimland BO, Weman H, van Helvoort A.** Transmission electron microscopy study of Pd/Ge/Au contacts to GaAs nanowires. 7th NanoNetwork workshop, 2016-06-13 - 2016-06-15, Trondheim, Norway.

**Nilsen JS, Huh J, Munshi AM, Dheeraj DL, Fimland BO, Weman H, van Helvoort A.** Pd/Ge/Au contacts on GaAs Nanowires. Nano@NTNU workshop, 2016-11-17 - 2016-11-18, Trondheim, Norway.

**Ren D, Dheeraj DL, Jin C, Nilsen JS, Huh J, Reinertsen JF, Munshi AM, Gustafsson A, van Helvoort A, Weman H, Fimland BO.** Self-catalyzed GaAsSb nanowires grown on silicon and graphene by molecular beam epitaxy: high-yield with stabilized crystal phase. 7th NanoNetwork workshop, 2016-06-13 - 2016-06-15, Trondheim, Norway.

**Ren D, Dheeraj DL, Nilsen JS, Huh J, van Helvoort A, Weman H, Fimland BO.** Effects of Sb on Crystal Phase, Morphology and Optical Emission of Self-catalyzed GaAsSb Nanowires on Si(111) and Graphitic Substrates. 19th International Conference on Molecular Beam Epitaxy, 2016-09-04 - 2016-09-09, Montpellier, France.

**Singh G, van Helvoort A, Seland F, Sunde S.** Designing multimetallic electrocatalytic nanoparticles with controlled composition and morphology. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Soleim BG, Sæterli R.** On the Inside of a Philips EM 400T Transmission Electron Microscope. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Sunde JK, Wenner S, van Helvoort A, Johnstone D, Midgley PA, Holmestad R.** Phase mapping of 2xxx-series aluminium alloys by scanning precession electron diffraction. European Microscopy Congress 2016,

**Sunde JK, Wenner S, van Helvoort A, Johnstone DN, Midgley PA, Holmestad R.** Phase Mapping of 2xxx-Series Aluminium Alloys by Scanning Precession Electron Diffraction. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Thorseth IH, Johannessen KC, Vullum PE, McLoughlin N.** Focused ion beam-transmission electron microscopy of extracellular stalks produced by iron-oxidizing bacteria. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

**Vullum PE, Johannessen KC.** Electron Energy Loss Spectroscopy to determine electronic properties in solid materials. 67th SCANDEM Meeting, 2016-06-07 - 2016-06-10, Trondheim, Norway.

## **PhD project theses**

**Vidar Tonaas Fauske,** “Electron Microscopy Based Characterization of Semiconductor Nanowires”, 29 June 2016, Doctoral theses at NTNU, 2016:181.

**Eva Anne Mørtzell,** “Precipitation in multicomponent, lean Al-Mg-Si alloys – A transmission electron microscopy study”, 30 September 2016, Doctoral theses at NTNU, 2016:266.

**Magnus Kristofer Nord,** “EELS and STEM studies of perovskite oxide heterostructures”, 15 December 2016, Doctoral theses at NTNU, 2016:361.

## **Master/ project theses**

**Tina Bergh,** “Transmission Electron Microscopy Characterization of Sintered and Hot-Pressed Silicon Carbide” (Diploma, June 2016).

**Andreas Garmannslund,** “Refinement of the  $\zeta$ -factor Method for Quantitative Energy-Dispersive X-ray Spectroscopy in Scanning Transmission Electron Microscopy” (Diploma, June 2016).

**Trond R. Henninen,** “Chemical Vapour Deposition and Electron Microscopy Analysis of Graphene”, (Diploma, June 2016).

**Theodor S. Holstad,** “Characterisation of BaTiO<sub>3</sub>/La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> thin films on SrTiO<sub>3</sub>(111) substrates – A transmission electron microscopy study” (Diploma, June 2016).

**Jonas K Sunde,** “Scanning precession electron diffraction study of 2xxx series aluminium alloys exhibiting several coexisting strengthening phases” (Diploma, June 2016).

**Philip Østli,** “Density Functional Theory Studies of Precipitate Interfaces in Aluminium Alloys, with Focus on Theta'-Al<sub>2</sub>Cu” (Diploma, June 2016).

**Ingrid Marie Andersen,** “TEM characterization of III-V nanowires for laser applications” (Diploma, started August 2016).

**Johannes Bogen,** “Data processing of Multidimensional TEM data sets” (Project, December 2016).

**Jochen Busan,** “TEM characterization of quartz” (Diploma, started August 2016).

**Hogne Lysne,** “Transmission electron microscopy of cellular breakdown in silver implanted silicon for intermediate band solar cells” (Project, December 2016)

**Steinar Myklebost,** “Quantitative image processing of electron microscopy data sets” (Project, started August 2016).

**Øyvind Paulsen,** “Effects of Germanium and Lithium in Al-Mg-Si alloys” (Project, December 2016)

**Håkon Wiik Ånes,** “Transmission Electron Microscopy Characterization of Hydride-based Smart Windows”, (Project, December 2016).