

TEM Gemini Centre Publications 2012

(People in Gemini Centre are highlighted)

Journal publications:

L. Ahtapodov, J. **Todorovic**, P. Olk, T. Mjåland, P. Slåttnes, D. L. Dheeraj, A. T. J. **van Helvoort**, B.-O. Fimland and H. Weman, "A Story Told by a Single Nanowire: Optical Properties of Wurtzite GaAs", *Nano Letters*, 12, 6090-6095, 2012.

Anawati, H. **Nordmark**, S. Diplas, J. C. **Walmsley** and K. Nisancioglu, "Surface Segregation of Trace Element Bismuth during Heat Treatment of Aluminum", *Journal of the Electrochemical Society*, 159, C137-C145, 2012.

R. **Bjørge**, S. J. **Andersen**, C. D. **Marioara**, J. Etheridge and R. **Holmestad**, "Scanning transmission electron microscopy investigation of an Al-Mg-Si-Ge-Cu alloy", *Philosophical Magazine*, 92, 3983-3993, 2012.

R. **Bjørge**, C. Dwyer, M. Weyland, P. N. H. Nakashima, C. D. **Marioara**, S. J. **Andersen**, J. Etheridge and R. **Holmestad**, "Aberration-corrected scanning transmission electron microscopy study of beta '-like precipitates in an Al-Mg-Ge alloy", *Acta Materialia*, 60, 3239-3246, 2012.

R. **Bjørge**, C. Dwyer, M. Weyland, P. N. H. Nakashima, J. Etheridge and R. **Holmestad**, "Quantitative HAADF STEM study of β -like precipitates in an Al-Mg-Ge alloy", *Journal of Physics: Conference Series*, 371, 012015, 2012.

Y. J. Chen, Y. J. **Li**, J. C. **Walmsley**, N. Gao, H. J. Roven, M. J. Starink and T. G. Langdon, "Microstructural heterogeneity in hexagonal close-packed pure Ti processed by high-pressure torsion", *Journal of Materials Science*, 47, 4838-4844, 2012.

R. **Dehghan-Niri**, J. C. **Walmsley**, A. Holmen, P. A. Midgley, E. Rytter, A. H. Dam, A. B. Hungria, J. C. Hernandez-Garrido and D. Chen, "Nanoconfinement of Ni clusters towards a high sintering resistance of steam methane reforming catalysts", *Catalysis Science & Technology*, 2, 2476-2484, 2012.

S. Gulbrandsen-Dahl, C. D. **Marioara**, K. O. Pedersen and K. Marthinsen, "Hardening of Al-Mg-Si alloys and effect of particle structure", *Materials Science Forum*, 706-709, 283-288, 2012.

R. **Holmestad**, R. **Bjørge**, F. J. H. Ehlers, M. Torsæter, C. D. **Marioara** and S. J. **Andersen**, "Characterization and structure of precipitates in 6xxx Aluminium Alloys", *Journal of Physics: Conference Series*, 371, 012082, 2012.

E. K. Jensen, S. Y. Larsen, U. C. Nygaard, C. D. **Marioara** and T. Syversen, "Early Combination of Material Characteristics and Toxicology Is Useful in the Design of Low Toxicity Carbon Nanofiber", *Materials*, 5, 1560-1580, 2012.

H. **Kauko**, R. **Bjørge**, R. **Holmestad** and A. T. J. **van Helvoort**, "Quantitative HAADF-STEM on heterostructured GaAs nanowires", *Journal of Physics: Conference Series*, 371, 012056, 2012.

M. M. **Kivambe**, T. Ervik, B. Rynningen and G. Stokkan, "On the role of stacking faults on dislocation generation and dislocation cluster formation in multicrystalline silicon", *Journal of Applied Physics*, 112, 103528-103528-103526, 2012.

- M. Kolar, K. **Teichmann**, S. Gulbrandsen-Dahl, K. O. Pedersen and K. **Marthinsen**, "Combined Effect of Deformation and Precipitation on Tensile Properties of an Al-Mg-Si Alloy", *Materials Science Forum*, 706-709, 351-356, 2012.
- P. Mohseni, J. K. **Solberg**, M. Karlsen, O. M. Akselsen and E. Østby, "Investigation of mechanism of cleavage fracture initiation in intercritically coarse grained heat affected zone of HSLA steel", *Materials Science and Technology*, 28, 1261-1268, 2012.
- Y. J. **Li**, A. M. F. **Muggerud**, A. Olsen and T. Furu, "Precipitation of partially coherent α -Al(Mn,Fe)Si dispersoids and their strengthening effect in AA 3003 alloy", *Acta Materialia*, 60, 1004-1014, 2012.
- M.-P. Liu, S.-C. Sun, H. J. Roven, Y.-D. **Yu**, Z. Zhang, M. Murashkin and R. Z. Valiev, "Deformation defects and electron irradiation effect in nanostructured Al-Mg alloy processed by severe plastic deformation", *Transactions of Nonferrous Metals Society of China*, 22, 1810-1816, 2012.
- C. D. **Marioara**, J. Nakamura, K. Matsuda, S. J. **Andersen**, R. **Holmestad**, T. Sato, T. Kawabata and S. Ikeno, "HAADF-STEM study of β' -type precipitates in an over-aged Al-Mg-Si-Ag alloy", *Philosophical Magazine*, 92, 1149-1158, 2012.
- F. A. **Martinsen**, F. J. H. **Ehlers**, M. **Torsæter** and R. **Holmestad**, "Reversal of the negative natural aging effect in Al-Mg-Si alloys", *Acta Materialia*, 60, 6091-6101, 2012.
- K. Matsuda, J. Nakamura, T. Kawabata, S. Ikeno, T. Sato, C. D. **Marioara**, S. J. **Andersen** and R. **Holmestad**, "Effect of additional elements (Cu, Ag) on precipitation in 6xxx (Al-Mg-Si) alloys", *Materials Science Forum*, 706-709, 357-360, 2012.
- A. M. Munshi, D. L. Dheeraj, V. T. **Fauske**, D. C. Kim, A. T. J. **van Helvoort**, B. O. Fimland and H. Weman, "Vertically Aligned GaAs Nanowires on Graphite and Few-Layer Graphene: Generic Model and Epitaxial Growth", *Nano Letters*, 12, 4570-4576, 2012.
- J. Nakamura, K. Matsuda, T. Sato, C. D. **Marioara**, S. J. **Andersen**, R. **Holmestad** and S. Ikeno, "The crystal structure of the β' -phase including Ag in Al-Mg-Si-Ag alloy", *Advanced Materials Research*, 409, 67-70, 2012.
- M. P. Pitt, P. E. **Vullum**, M. H. Sorby, D. Blanchard, M. P. Sulic, H. Emerich, M. Paskevicius, C. E. Buckley, J. **Walmsley**, R. **Holmestad** and B. C. Hauback, "The location of Ti containing phases after the completion of the $\text{NaAlH}_4 + x\text{TiCl}_3$ milling process", *Journal of Alloys and Compounds*, 513, 597-605, 2012.
- M. P. Pitt, P. E. **Vullum**, M. H. Sorby, H. Emerich, M. Paskevicius, C. E. Buckley, E. M. Gray, J. C. **Walmsley**, R. **Holmestad** and B. C. Hauback, "Amorphous $\text{Al}_{1-x}\text{Ti}_x$, $\text{Al}_{1-x}\text{V}_x$, and $\text{Al}_{1-x}\text{Fe}_x$ phases in the hydrogen cycled TiCl_3 , VCl_3 and FeCl_3 enhanced NaAlH_4 systems", *Journal of Alloys and Compounds*, 521, 112-120, 2012.
- M. P. Pitt, P. E. **Vullum**, M. H. Sorby, H. Emerich, M. Paskevicius, C. E. Buckley, E. M. Gray, J. C. **Walmsley**, R. **Holmestad** and B. C. Hauback, "A structural review of nanoscopic $\text{Al}_{1-x}\text{TM}_x$ phase formation in the TMCl_n enhanced NaAlH_4 system", *Journal of Alloys and Compounds*, 527, 16-24, 2012.
- M. P. Pitt, P. E. **Vullum**, M. H. Sorby, H. Emerich, M. Paskevicius, C. E. Buckley, J. C. **Walmsley**,

- R. **Holmestad** and B. C. Hauback, "Hydrogen Absorption Kinetics of the Transition-Metal-Chloride-Enhanced NaAlH₄ System", *Journal of Physical Chemistry C*, 116, 14205-14217, 2012.
- M. P. Pitt, P. E. **Vullum**, M. H. Sorby, H. Emerich, M. Paskevicius, C. J. Webb, E. M. Gray, C. E. Buckley, J. C. **Walmsley**, R. **Holmestad** and B. C. Hauback, "Hydrogen absorption kinetics and structural features of NaAlH₄ enhanced with transition-metal and Ti-based nanoparticles", *International Journal of Hydrogen Energy*, 37, 15175-15186, 2012.
- M. P. Pitt, P. E. **Vullum**, M. H. Sorby, M. P. Sulic, H. Emerich, M. Paskevicius, C. E. Buckley, J. C. **Walmsley**, R. **Holmestad** and B. C. Hauback, "Functionality of the nanoscopic crystalline Al/amorphous Al₅₀Ti₅₀ surface embedded composite observed in the NaAlH₄ + xTiCl(3) system after milling", *Journal of Alloys and Compounds*, 514, 163-169, 2012.
- E. Rauwel, A. Galeckas, P. Rauwel, O. Nilsen, J. C. **Walmsley**, E. Rytter and H. Fjellvag, "ALD Applied to Conformal Coating of Nanoporous gamma-Alumina: Spinel Formation and Luminescence Induced by Europium Doping", *Journal of the Electrochemical Society*, 159, P45-P49, 2012.
- T. O. L. Sunde, E. Garskaite, B. Otter, H. E. Fossheim, R. **Saeterli**, R. **Holmestad**, M.-A. Einarsrud and T. Grande, "Transparent and conducting ITO thin films by spin coating of an aqueous precursor solution", *Journal of Materials Chemistry*, 2012.
- K. **Teichmann**, C. D. **Marioara**, S. J. **Andersen** and K. **Marthinsen**, "The Effect of Preaging Deformation on the Precipitation Behavior of an Al-Mg-Si Alloy", *Metallurgical and Materials Transactions a-Physical Metallurgy and Materials Science*, 43A, 4006-4014, 2012.
- M. **Torsæter**, F. J. H. **Ehlers**, C. D. **Marioara**, S. J. **Andersen** and R. **Holmestad**, "Applying precipitate-host lattice coherency for compositional determination of precipitates in Al-Mg-Si-Cu alloys", *Philosophical Magazine*, 1-24, 2012.
- D. T. **Tran**, I. P. Jones, J. A. Preece, R. L. Johnston, K. Deplanche and L. E. Macaskie, "Configuration of microbially synthesized Pd-Au nanoparticles studied by STEM-based techniques", *Nanotechnology*, 23, 2012.
- B. Wang, Z. Rozynek, J. O. Fossum, K. D. Knudsen and Y. **Yu**, "Guided self-assembly of nanostructured titanium oxide", *Nanotechnology*, 23, 279502, 2012.
- C. Weigand, J. **Tveit**, C. Ladam, R. **Holmestad**, J. Grepstad and H. Weman, "Epitaxial relationships of ZnO nanostructures grown by Au-assisted pulsed laser deposition on c- and a-plane sapphire", *Journal of Crystal Growth*, 355, 52-58, 2012.
- S. **Wenner**, R. **Holmestad**, K. Matsuda, K. Nishimura, T. Matsuzaki, D. Tomono, F. L. Pratt and C. D. **Marioara**, "Probing defects in Al-Mg-Si alloys using muon spin relaxation", *Physical Review B*, 86, 2012.
- S. **Wenner**, C. D. **Marioara**, S. J. **Andersen** and R. **Holmestad**, "Effect of room temperature storage time on precipitation in Al-Mg-Si(-Cu) alloys with different Mg/Si ratios", *International Journal of Materials Research*, 103, 948-954, 2012.
- I. **Westermann**, A. L. Haugstad, Y. Langsrud and K. **Marthinsen**, "Effect of quenching rate on microstructure and mechanical properties of commercial AA7108 aluminium alloy", *Transactions of Nonferrous Metals Society of China*, 22, 1872-1877, 2012.

Y. Wu, M. V. Lototsky, J. K. **Solberg** and V. A. Yartys, "Effect of microstructure on the phase composition and hydrogen absorption-desorption behaviour of melt-spun Mg-20Ni-8Mm alloys", *International Journal of Hydrogen Energy*, 37, 1495-1508, 2012.

Conference talks/posters/seminars/meetings (Presenter underlined)

L. Ahtapodov, I. **Snustad**, S. Gulla, A.M. Munshi, B.O. Fimland, A. T. J. **van Helvoort**, and H. Weman, "Correlated micro photoluminescence and transmission electron microscopy on single self-assisted GaAs/AlGaAs core-shell nanowires", 7th NTNU Nanolab User Meeting, Trondheim, Norway, December 12, 2012. [Talk]

L. Ahtapodov, J. **Todorovic**, P. Olk, T.S. Mjaaland, P. R.T. Slaattnes, D.L. Dheeraj, A.T.J. **van Helvoort**, B.-O. Fimland, H. Weman, "Combined micro-photoluminescence and electron microscopy investigation of single GaAs nanowires", ICPS Zurich, Switzerland, 29 July 03 August, 2012. [Talk]

L. Ahtapodov, J. **Todorovic**, P. Olk, D. C. Kim, T. S. Mjaaland, M. Eriksson, D. L. Dheeraj, A. T. J. **van Helvoort**, P. Bergman, B. O. Fimland, and H. Weman, "Wurtzite versus Zincblende GaAs – A Thorough Comparison", MRS 2012 Spring Meeting, San Francisco, California, USA, 9-13 April 2012. [Talk]

L. Ahtapodov, J. **Todorovic**, P. Olk, T. S. Mjaaland, P. R. T. Slaattnes, D. L. Dheeraj, A. T. J. **van Helvoort**, B.O. Fimland and H. Weman, "Optical Characterization of Single GaAs/AlGaAs Nanowires with Combined Photoluminescence Spectroscopy and Transmission Electron Microscopy on the Same Nanowire", 3rd Nano-network workshop, Trondheim, 11-13 June, 2012. [Poster]

R. **Bjørge**, R. Holmestad, C. D. **Marioara**, S. J. **Andersen**, M. Weiland, J. Etheridge, "Quantitative STEM Study of the β' -Ge Phase in Al-Mg-Ge Alloys", Microscopy and Microanalysis (M&M) 2012 meeting, Phoenix, AZ, USA, 29 July - 2 Aug. 2012. [Talk]

D. L. Dheeraj, A. M. Munshi, O. M. Christoffersen, D. C. Kim, A. T. J. **van Helvoort**, B. O. Fimland and H. Weman, "Growth and characterization of Be-doped GaAs nanowires grown by Au- and Ga-assisted molecular beam epitaxy", MBE2012, Nara, Japan, 23-28 September 2012. [Talk]

R. Dehghan-Niri, A. Voronov, Alexey, A. Holmen, R. **Holmestad**, Ø. Borg, E. Rytter, and J. C. **Walmsley**, "Reduction of Promoted Cobalt Phase Supported on γ -Al₂O₃ Studied by Transmission Electron Microscopy", The 2nd International Symposium on Advanced Electron Microscopy for Catalysis and Energy Storage Materials, Berlin, Germany, 5-8 February 2012.[Poster]

R. Dehghan-Niri, J. C. **Walmsley**, "Advanced Transmission Electron Microscopy Studies of Cobalt Fischer-Tropsch Catalysts", inGAP annual seminar, Oslo, Norway, 6-8 December 2012. [Poster].

V. T. Fauske, A. M. Munshi, D. L. Dheeraj, D. C. Kim, B. O. Fimland, H. Weman, and A. T. J. **van Helvoort**, "FIB prepared site-specific cross-sectional TEM specimen of nanowire-substrate interfaces", 7th NTNU Nanolab User Meeting, Trondheim, Norway, December 12, 2012. [Poster]

V. T. Fauske, A. M. Munshi, D. L. Dheeraj, D. C. Kim, B. O. Fimland, H. Weman, and A. T. J. **van Helvoort**, "Site-specific, cross-sectional TEM samples of as-grown nanowires by FIB", 15th European Microscopy Congress (EMC2012), Manchester, UK, 16-21 September 2012. [Poster]

V. T. Fauske, A. M. Munshi, D. L. Dheeraj, D. C. Kim, B. O. Fimland, H. Weman, and A. T. J. **van Helvoort**, "Transmission Electron Microscopy Study of Defects at the Interface between GaAs Nanowires and a Si-111 Substrate", 3rd Nano-network workshop, Trondheim, 11-13 June, 2012. [Talk, Best student presentation price]

V. T. Fauske, A. M. Munshi, D. L. Dheeraj, D. C. Kim, B. O. Fimland, H. Weman, and A. T. J. **van Helvoort**, "Characterization of the Interface between GaAs Nanowires and a 111-Si Substrate", MRS 2012 Spring Meeting, San Francisco, California, USA, 9-13 April 2012. [Poster]

H. Granlund, J. B. Fløystad, M. Esmaeili, E. T. Bakken, P.E. **Vullum**, E. Andreassen, and D. W. Breiby, "Mapping Structural Gradients in Injection-Molded Polypropylene", Norwegian Synchrotron and Neutron User Meeting, Stavanger, January 2012. [Talk]

R. Holmestad, J. **Walmsley**, Ø. Prytz, B.G. **Soleim**, A.T.J. **van Helvoort**, A. Olsen, A. Gunnæs, R. **Bjørge**, R. **Sæterli**, J. Taftø, J.K. **Solberg**, P.E. **Vullum**, C.D. **Marioara**, Y. **Yu**, A. Thøgersen, M. Rodewald, M. Bergius, and A. Lazar, "NORTEM – ambitions and plans", Scandem 2012, Bergen, Norway, 13-15 Juni 2012. [Talk]

R. Holmestad, "Precipitation in 6XXX aluminum alloys" Hard Materials Seminar, Department of Materials Science and Engineering, University of Illinois, at Urbana-Champaign, 27 September 2012. [Talk]

R. Holmestad, "Formation of clusters and precipitates in age hardenable Al alloys" Condensed Matter Physics seminar, Dept. of Physics, University of Illinois, at Urbana-Champaign, 26 October 2012. [Talk]

R. Holmestad, "Precipitates in Al-Mg-Si-Cu Alloys - Structure, Composition, Coherency and Interfaces" Symposium TT: Defects and Microstructure Complexity in Materials, MRS 2012 Fall meeting, Boston, 25-30 November 2012. [Invited talk]

H. Kauko, T. Grieb, A. Rosenauer and A. T. J. **van Helvoort**, "Studying Sb distribution in heterostructured GaAs/GaAsSb nanowires with quantitative HAADF-STEM", 15th European Microscopy Congress (EMC2012), Manchester, UK, 16-21 September 2012. [Poster]

D. C. Kim, A.M. Munshi, D. L. Dheeraj, C. G. Lim, V. T. **Fauske**, A. T. J. **van Helvoort**, B. O. Fimland and H. Weman, "Semiconductor Nanowire Based Solar Cells-A Nordic Top-level Research Initiative", Technoport, Trondheim, 16-18 April, 2012. [Talk]

D. C. Kim, L. Ahtapodov, D. L. Dheeraj, J. **Todorovic**, A. T. J **van Helvoort**, B. O. Fimland, and H. Weman, "Photocurrent study of Single Wurtzite AlGaAs-GaAs Core/shell nanowires", MRS 2012 Spring Meeting, San Francisco, California, USA, 9-13 April 2012. [Talk]

K. Köksal; J. C. **Walmsley**, S. Diplas, and K. Nisancioglu, "Combined Role of Trace Elements Pb and Sn in Low Temperature Activation of Aluminum", PRIME 2012; Honolulu, USA, October 2012. [Poster]

O. Lunder, Ø. Bauger, J. C. **Walmsley**, and J. E. Lein, "Effect of Trace Element Nickel on Corrosion of AA6060 Aluminium in Chloride Solution", 6th International Symposium on Aluminium Surface Science and Technology (ASST 2012); Sorrento, Italy, May 2012. [Talk]

C. D. Marioara, "Nano-precipitates and alloy development in the 6xxx aluminium alloy system",

7th NTNU Nanolab User Meeting, Trondheim, Norway, December 12, 2012. [Talk]

A. M. F. Muggerud, E. A. **Mørtzell**, Y. **Li** and R. **Holmestad**, "Dispersoid Strengthening in 3xxx Al-Fe-Mn-Si alloys with varying Mn and Si content", ICPMAT2012, Trondheim, June 18-20, 2012. [Poster]

A. M. Munshi, D. L. Dheeraj, V. T. **Fauske**, D. C. Kim, A. T. J. **van Helvoort**, B. O. Fimland, and H. Weman, " Epitaxial growth of semiconductor III-V nanowires on graphene: A template for future opto-electronic device applications", 7th NTNU Nanolab User Meeting, Trondheim, Norway, December 12, 2012. [Talk]

A. M. Munshi, D. L. Dheeraj, V. T. **Fauske**, D. C. Kim, A. T. J. **van Helvoort**, B. O. Fimland, and H. Weman, " Epitaxial Growth of High Quality Vertical GaAs Nanowires on Graphene by Molecular Beam Epitaxy", MRS 2012 Fall Meeting, Boston, USA, 25-30 November 2012. [Talk]

A. M. Munshi, D. L. Dheeraj, J. **Todorovic**, A. T. J. **van Helvoort**, B. O. Fimland, and H. Weman, " Crystal phase tuning in self-catalyzed GaAs nanowires induced by Ga-droplet contact angle", MBE2012, Nara, Japan, 23-28 September 2012. [Talk]

A. M. Munshi, D. L. Dheeraj, V.T. **Fauske**, D.C. Kim, A.T.J. **van Helvoort**, B. O. Fimland, and H. Weman, " A generic model and experimental demonstration of epitaxial growth of GaAs nanowires on graphene layers", MBE2012, Nara, Japan, 23-28 September 2012. [Talk]

A. M. Munshi, D. L. Dheeraj, J. **Todorovic**, A. T. J. **van Helvoort**, B. O. Fimland, and H. Weman, " Crystal phase tuning in self-catalyzed GaAs nanowires induced by Ga-droplet contact angle", 3rd Nano-network workshop, Trondheim, 11-13 June, 2012. [Talk]

A. M. Munshi, D. L. Dheeraj, D. C. Kim, A. T. J. **van Helvoort**, B. O. Fimland, and H. Weman " Zinc blende and wurtzite GaAs nanowires grown by self-catalyzed molecular beam epitaxy", MRS 2012 Spring Meeting, San Francisco, California, USA, 9-13 April 2012. [Talk]

M. K. Nord, J. E. Boschker, P. E. **Vullum**, T. Tybell, and R. **Holmestad**, " Domain Relaxation in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$ Thin Films due to Declamping", Microscopy & Microanalysis (M&M) 2012, Phoenix, USA, August 2012. [Poster]

M. K. Nord, J. E. Boschker, P. E. **Vullum**, T. Tybell, and R. **Holmestad**, " Transmission Electron Microscopy characterization of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$ ferroelastic thin films", MRS 2012 Fall Meeting, Boston, USA, 25-30 November 2012. [Poster]

M. K. Nord, J. E. Boschker, P. E. **Vullum**, T. Tybell, and R. **Holmestad**, "Transmission Electron Microscopy characterization of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$ ferroelastic thin films", 3rd NanoNetwork workshop; Trondheim, 11-13 June 2012. [Poster]

M. K. **Nord**, J. E. Boschker, P. E. **Vullum**, T. Tybell, and R. **Holmestad**, " Transmission Electron Microscopy characterization of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$ ferroelastic thin films", Scandem 2012; Bergen, June 2012. [Poster]

T. Saito, S. Muraishi, C.D. **Marioara** and R. **Holmestad**, "Effect of low Cu amounts and pre-deformation on the precipitation in Al-Mg-Si alloys", 13th International Conference on Aluminum Alloys (ICAA13), Pittsburgh, USA, 2012. [Talk]

T. Saito, S. Muraishi, C.D. **Marioara** and R. **Holmestad**, "Influence of low Cu amounts in

combination with pre-deformation on the precipitate structures in Al-Mg-Si alloys", 7th International Conference on the Physical Properties and Application of Advanced Materials (ICPMAT 2012), Trondheim, Norway, 2012. [Poster]

J. Todorovic, A. F. Moses, L. Ahtapodov, P. Olk, D. L. Dheeraj, B.-O. Fimland, H. Weman and **A. T. J. van Helvoort**, "Correlation of optical and structural properties of single semiconductor heterostructured nanowires", Scandem 2012, Bergen, Norway, 13-15 Juni, 2012. [Talk]

D.T. Tran, J.C. **Walmsley**, S. Housseini, J. Zhu, D. Chen and M. Rønning, "Electron tomography study of zeolite-encapsulated Pt clusters", The 2nd International Symposium on Advanced Electron Microscopy for Catalysis and Energy Storage Materials, Berlin, Germany, 5-8 February 2012. [Poster]

D.T. Tran, J.C. **Walmsley**, D. Chen and M. Rønning, "CaO-CeO₂ mixed nanocatalysts studied by transmission electron microscopy", 15th European Microscopy Congress (EMS2012), Manchester, UK, 16-21 September 2012. [Poster]

S. Wenner, K. Matsuda, K. Nishimura, J. Banhart, T. Matsuzaki, D. Tomono, F.L. Pratt, M. Liu, Y. Yan, C.D. **Marioara**, R. **Holmestad**, "Muon spin relaxation and positron annihilation spectroscopy studies of solute clustering in Al-Mg-Si alloys", 7th International Conference on the Physical Properties and Application of Advanced Materials (ICPMAT 2012), Trondheim, Norway, 2012 [Poster]

S. Wenner, "Muon spin relaxation and the hunt for vacancies in aluminium alloys" 7th NTNU Nanolab User Meeting, Trondheim, Norway, 12 December, 2012. [Talk]

Book/book chapters

Proceedings of 13th International Conference on Aluminum Alloys: ICAA13, June 3-7, 2012, Pittsburgh, USA.

Edited by H. Weiland, A. D. Rollett and W. A. Cassada,
Wiley, 2012, ISBN: 978-1-1184-5804-4.

Published Online: 4 Sept. 2012. DOI: 10.1002/9781118495292.ch230

R. **Bjørge**, S. J. **Andersen**, C. D. **Marioara**, J. Etheridge, and R. **Holmestad**, "Aberration-Corrected STEM Study of Precipitates in an Al-Mg-Si-Ge-Cu Alloy", pp. 3-8.

S. **Wenner**, K. Matsuda, K. Nishimura, J. Banhart, T. Matsuzaki, D. Tomono, F. L. Pratt, M. Liu, Y. Yan, C. D. **Marioara**, and R. **Holmestad**, "Muon Spin Relaxation and Positron Annihilation Spectroscopy Studies of Natural Aging in Al-Mg-Si Alloys", pp. 37-42.

J. **Holmestad**, Ø. Dahl, S. J. **Andersen**, O. Reiso, R. **Holmestad**, and J. C. **Walmsley**, "Initial Studies of 6082 Aluminium Thin Films", pp. 245-250.

F. J. H. **Ehlers**, S. **Wenner**, S. J. **Andersen**, C. D. **Marioara**, and R. **Holmestad**, "The Role of the Si Network to the Stabilization of Hardening Precipitates in the Al-Mg-Si(-Cu) Alloy System", pp. 279-284.

T. **Saito**, S. Muraishi, C. D. **Marioara**, and R. **Holmestad**, "Effect of Low Cu Amounts and Pre-Deformation on the Precipitation in Al-Mg-Si Alloys", pp. 1063-1068.

A. M. F. **Muggerud**, Y. **Li**, and R. **Holmestad**, "Orientation Relationship of Dispersoids Precipitated in an AA3xxx Alloy during Annealing at Low Temperatures", pp. 1161-1166.

E. A. **Mørtzell**, A. M. **Muggerud**, Y. **Li**, and R. **Holmestad**, "Dispersion Hardening Effect of Dispersoids in 3xxx Al Alloys With Varying Manganese", pp. 1527-1532.

J.H. Kim, **C.D. Marioara**, **R. Holmestad**, E. Kobayashi and T. Sato "Effects of microalloying elements (Cu, Ag) on nanocluster formation and age-hardening behaviour in Al-Mg-Si alloys", pp. 1057-1062.

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