Sigmund Jarle Andersen

List of Publications by Year
in descending order

60 papers	4,420 citations	186265 28 h-index	155660 55 g-index
61 all docs	61 docs citations	61 times ranked	1538 citing authors

#	Article	IF	Citations
1	The crystal structure of the Î²â€³ phase in Alâ€“Mgâ€“Si alloys. Acta Materialia, 1998, 46, 3283-3298.	7.9	558
2	Modelling of the age hardening behaviour of Alâ€“Mgâ€“Si alloys. Acta Materialia, 2001, 49, 65-75.	7.9	455
3	Structure Determination of Mg5Si6 Particles in Al by Dynamic Electron Diffraction Studies. Science, 1997, 277, 1221-1225.	12.6	365
4	The crystal structure of the Î²â€² phase in Alâ€“Mgâ€“Si alloys. Acta Materialia, 2007, 55, 3815-3823.	7.9	364
5	The influence of temperature and storage time at RT on nucleation of the Î²â€³ phase in a 6082 Alâ€“Mgâ€“Si alloy. Acta Materialia, 2003, 51, 789-796.	7.9	317
6	Atomic model for GP-zones in a 6082 Alâ€“Mgâ€“Si system. Acta Materialia, 2001, 49, 321-328.	7.9	292
7	Composition of Î²â€³ precipitates in Alâ€“Mgâ€“Si alloys by atom probe tomography and first principles calculations. Journal of Applied Physics, 2009, 106, .	2.5	185
8	Crystal structure of the orthorhombic U2-Al4Mg4Si4 precipitate in the Alâ€“Mgâ€“Si alloy system and its relation to the Î²â€² and Î²â€³ phases. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 390, 127-138.	5.6	181
9	Detailed atomistic insight into the Î²â€³ phase in Alâ€“Mgâ€“Si alloys. Acta Materialia, 2014, 69, 126-134.	7.9	156
10	The structural relation between precipitates in Alâ€“Mgâ€“Si alloys, the Al-matrix and diamond silicon, with emphasis on the trigonal phase U1-MgAl2Si2. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 444, 157-169.	5.6	151
11	Quantification of the Mg2Si Î²â€³ and Î²â€² phases in AlMgSi alloys by transmission electron microscopy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 1931-1937.	2.2	98
12	Atomic structure of hardening precipitates in an Alâ€“Mgâ€“Znâ€“Cu alloy determined by HAADF-STEM and first-principles calculations: relation to Î·-MgZn2. Journal of Materials Science, 2013, 48, 3638-3651.	3.7	85
13	Bonding in MgSi and Al-Mg-Si compounds relevant to Al-Mg-Si alloys. Physical Review B, 2003, 67, .	3.2	80
14	Improving Thermal Stability in Cu-Containing Al-Mg-Si Alloys by Precipitate Optimization. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 2938-2949.	2.2	76
15	Aberration-corrected HAADF-STEM investigations of precipitate structures in Alâ€“Mgâ€“Si alloys with low Cu additions. Philosophical Magazine, 2014, 94, 520-531.	1.6	70
16	The Effects of Low Cu Additions and Predeformation on the Precipitation in a 6060 Al-Mg-Si Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4124-4135.	2.2	67
17	Modeling over-ageing in Al-Mg-Si alloys by a multi-phase CALPHAD-coupled Kampmann-Wagner Numerical model. Acta Materialia, 2017, 122, 178-186.	7.9	65
18	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, 2012, 43, 4006-4014.	2.2	60

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19	Atomic Structures of Precipitates in Alâ€“Mgâ€“Si Alloys with Small Additions of Other Elements. Advanced Engineering Materials, 2018, 20, 1800125.	3.5	60
20	TEM study of Î²â€² precipitate interaction mechanisms with dislocations and Î²â€² interfaces with the aluminium matrix in Alâ€“Mgâ€“Si alloys. Materials Characterization, 2013, 75, 1-7.	4.4	59
21	The effect of Zn on precipitation in Alâ€“Mgâ€“Si alloys. Philosophical Magazine, 2014, 94, 2410-2425.	1.6	54
22	HAADF-STEM and DFT investigations of the Zn-containing Î²â€³ phase in Alâ€“Mgâ€“Si alloys. Acta Materialia, 2014, 78, 245-253.	7.9	52
23	A first-principles study of the Î²''-phase in Al-Mg-Si alloys. Journal of Physics Condensed Matter, 2002, 14, 4011-4024.	1.8	47
24	Effects of Germanium, Copper, and Silver Substitutions on Hardness and Microstructure in Lean Al-Mg-Si Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4369-4379.	2.2	42
25	Precipitation in an Alâ€“Mgâ€“Cu alloy and the effect of a low amount of Ag. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 658, 91-98.	5.6	36
26	Cu atoms suppress misfit dislocations at the Î²â€³/Al interface in Alâ€“Mgâ€“Si alloys. Scripta Materialia, 2016, 110, 6-9.	5.2	35
27	Effect of room temperature storage time on precipitation in Alâ€“Mgâ€“Si(â€“Cu) alloys with different Mg/Si ratios. International Journal of Materials Research, 2012, 103, 948-954.	0.3	33
28	Precipitation processes and structural evolutions of various GPB zones and two types of S phases in a cold-rolled Al-Mg-Cu alloy. Materials and Design, 2021, 199, 109425.	7.0	31
29	The effects and behaviour of Li and Cu alloying agents in lean Al-Mg-Si alloys. Journal of Alloys and Compounds, 2017, 699, 235-242.	5.5	30
30	Precipitates in aluminium alloys. Advances in Physics: X, 2018, 3, 1479984.	4.1	28
31	Aberration-corrected scanning transmission electron microscopy study of Î²â€²-like precipitates in an Alâ€“Mgâ€“Ge alloy. Acta Materialia, 2012, 60, 3239-3246.	7.9	24
32	Atomistic details of precipitates in lean Alâ€“Mgâ€“Si alloys with trace additions of Ag and Ge studied by HAADF-STEM and DFT. Philosophical Magazine, 2017, 97, 851-866.	1.6	23
33	Z-contrast imaging of the arrangement of Cu in precipitates in 6XXX-series aluminium alloys. Philosophical Magazine Letters, 2006, 86, 589-597.	1.2	21
34	Enhanced nucleation and precipitation hardening in Alâ€“Mgâ€“Si(â€“Cu) alloys with minor Cd additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 792, 139698.	5.6	18
35	Precipitates in an Alâ€“Mgâ€“Ge alloy studied by aberration-corrected scanning transmission electron microscopy. Acta Materialia, 2011, 59, 6103-6109.	7.9	17
36	Quantification of small, convex particles by TEM. Ultramicroscopy, 2008, 108, 750-762.	1.9	16

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37	A hybrid aluminium alloy and its zoo of interacting nano-precipitates. Materials Characterization, 2015, 106, 226-231.	4.4	16
38	The effect of heavy deformation on the precipitation in an Al-1.3Cu-1.0Mg-0.4Siâ€¯wt.% alloy. Materials and Design, 2020, 186, 108203.	7.0	16
39	The Dual Nature of Precipitates in Al-Mg-Si Alloys. Materials Science Forum, 2010, 638-642, 390-395.	0.3	15
40	Directionality and Column Arrangement Principles of Precipitates in Al-Mg-Si-(Cu) and Al-Mg-Cu Linked to Line Defect in Al. Materials Science Forum, 0, 877, 461-470.	0.3	15
41	Improving ageing kinetics and precipitation hardening in an Al-Mg-Si alloy by minor Cd addition. Materialia, 2018, 4, 33-37.	2.7	15
42	Structural modifications and electron beam damage in aluminium alloy precipitate Î¸'â€“AL₂. Philosophical Magazine, 2015, 95, 3524-3534.	1.6	14
43	Effect of pre-deformation on age-hardening behaviors in an Al-Mg-Cu alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 820, 141557.	5.6	12
44	Characterization and structure of precipitates in 6xxx Aluminium Alloys. Journal of Physics: Conference Series, 2012, 371, 012082.	0.4	10
45	How calcium prevents precipitation hardening in Alâ€“Mgâ€“Si alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 575, 241-247.	5.6	9
46	Mackay icosahedron explaining orientation relationship of dispersoids in aluminium alloys. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2014, 70, 888-896.	1.1	7
47	Icosahedral quasicrystals in an AlMnCrSi alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 134, 1215-1219.	5.6	6
48	Coherence between icosahedral quasicrystals and aluminium in an Alâ€”Mnâ€”Crâ€”Si alloy. Philosophical Magazine Letters, 1991, 63, 179-183.	1.2	5
49	Elemental electron energy loss mapping of a precipitate in a multi-component aluminium alloy. Micron, 2016, 86, 22-29.	2.2	5
50	Germanium network connecting precipitates in an Mg-rich Al-Mg-Ge alloy. Journal of Electron Microscopy, 2010, 59, S129-S133.	0.9	4
51	The Crystal Structure of the Î²â€™-Phase Including Ag in Al-Mg-Si-Ag Alloy. Advanced Materials Research, 0, 409, 67-70.	0.3	4
52	A TEM study of a newly discovered metastable phase in an AlMnCrSi alloy. Micron and Microscopica Acta, 1992, 23, 165-166.	0.2	3
53	Effect of Additional Elements (Cu, Ag) on Precipitation in 6xxx (Al-Mg-Si) Alloys. Materials Science Forum, 0, 706-709, 357-360.	0.3	3
54	Data on atomic structures of precipitates in an Al-Mg-Cu alloy studied by high resolution transmission electron microscopy and first-principles calculations. Data in Brief, 2021, 34, 106748.	1.0	3

#	Article	IF	Citations
55	AutomAl 6000: Semi-automatic structural labelling of HAADF-STEM images of precipitates in Alâ€"Mgâ€"Si(â€"Cu) alloys. Ultramicroscopy, 2022, 236, 113493.	1.9	3
56	The Effect of Elastic Strain and Small Plastic Deformation on Tensile Strength of a Lean Alâ€"Mgâ€"Si Alloy. Metals, 2019, 9, 1276.	2.3	2
57	Si-particles in an AlNiSiMn alloy. Micron and Microscopica Acta, 1992, 23, 135-136.	0.2	1
58	Structural investigation of precipitates with Cu and Zn atomic columns in Al-Mg-Si alloys by aberration-corrected HAADF-STEM. Journal of Physics: Conference Series, 2014, 522, 012030.	0.4	1
59	The Effect of Elastic Straining on a 6060 Aluminium Alloy during Natural or Artificial Ageing. Materials Science Forum, 0, 794-796, 1205-1210.	0.3	0
60	Studying clusters and nano-precipitates in Aluminium alloys using SPED and ADF-STEM. Microscopy and Microanalysis, 2021, 27, 3090-3094.	0.4	0