

## List of publications

#	Articles in Journals	pdf	kB
A1	K.H. Gaukler and R. Schwarzer Verbessertes Verfahren zur Bestimmung des mittleren inneren Potentials aus Reflexions-Kikuchi-Diagrammen. Optik <b>33</b> (1971) 215-229	424	
A2	K.H. Gaukler and R. Schwarzer Elektronen-Emissions-Mikroskopie (Review article). Messtechnik <b>81</b> (1973) 307-316	1.190	
A3	J. Hofmeister and R. Schwarzer Zum Einfluß der kristallographischen Orientierung auf den vektoriellen Photoeffekt. Physics Letters <b>53A</b> (1975) 283-284	501	
A4	G.H. Hartmann, H.P. Niemitz, and R.A. Schwarzer Bestimmung des mittleren inneren Potentials von Diamant und von Vanadium-Pentoxid aus Reflexions-Kikuchi-Diagrammen. Optik <b>44</b> (1975) 37-43	488	
A5	R. Schwarzer Der Einfluß von Loch- und Ringblenden auf die Energieverteilung der Elektronen im Emissions-Elektronenmikroskop. Optik <b>44</b> (1975) 61-78	1.078	
A6	R. Schwarzer Die Verbesserung des Bildkontrastes im Emissions-Elektronenmikroskop durch eine ringförmige Aperturblende. Optik <b>44</b> (1975) 121-131	533	
A7	M.B. Trullenque, Z.P. Argüello, and R.A. Schwarzer Investigations of ionic crystals with the photoemission electron microscope. Revista Microscopia Electrónica <b>3</b> (1976) 156-157	252	
A7a	R.A. Schwarzer, J.I. Cisneros, M. Tomyiama, Shih-Lin Chang, and Z.P. Argüello Study of Orientation Contrast and Information Depth in LiF with the Photoemission Electron Microscope (PEEM). Revista de Microscopía Electrónica <b>5</b> (1978)	288	
A8	W. May, E.A. Farah, and R. Schwarzer EMA and PEEM studies of WC-Ti interface reactions. Revista Microscopia Electrónica <b>3</b> (1976) 190-191	390	
A9	R. Schwarzer and K.H. Gaukler Erzeugung einer Ionen-Mikrosonde mittels Feldionisation und Emissionslinse. Vakuum-Technik <b>27</b> (1978) 2-5	81	
A10	R. Schwarzer Die Bestimmung von Strukturpotentialen aus Kossel-Möllenstedt-Diagrammen an epitaktisch aufgedampften, freitragenden Kupfereinkristallschichten. Optik <b>54</b> (1979) 193-199	190	
A12	R.A. Schwarzer Bestimmung von Polfiguren und Texturanalyse mit dem	507	

	Transmissions-Elektronenmikroskop. Z. Metallkunde <b>73</b> (1982) 495-498	
A13	R.A. Schwarzer On-line measurement of foil thickness from Kossel-Möllenstedt diffraction patterns. Optik <b>77</b> (1987) 55-56	179
A14	R.A. Schwarzer and H. Weiland Texture analysis by the measurement of individual grain orientations - Electron microscopical methods and application on dual-phase steel. Textures and Microstructures <b>8&amp;9</b> (1988) 551-577	1.459
A15	R.A. Schwarzer Measurement of local textures with transmission and scanning electron microscopes. Textures and Microstructures <b>13</b> (1990) 15-30	1.502
A16	R. Schwarzer Die Kristalltextur in der Mikroelektronik. Teil 1. Elektronenmikroskopische Meßverfahren. Verbindungstechnik in der Elektronik <b>3</b> (1991) Heft 1, 16-20 Teil 2. Hügelbildung in dünnen Metallisierungsschichten. Verbindungstechnik in der Elektronik <b>3</b> (1991) Heft 2, 56-59	1.419
A17	R.A. Schwarzer A review of the analysis of local texture by electron diffraction. Textures and Microstructures <b>14-18</b> (1991) 85-90	799
A18	R.A. Schwarzer Scanning X-ray apparatus for texture mapping by energy dispersive diffraction. Textures and Microstructures <b>14-18</b> (1991) 241-244	478
A19	R.A. Schwarzer Texture analysis by electron diffraction. Steel research <b>62</b> (1991) 542-547	1.079
A20	D. Gerth, D. Katzer, and R. Schwarzer Correlation between grain growth and hillock growth in thin thermally annealed Al-1%Si films on silicon substrates. Materials Science Forum <b>94-96</b> (1992) 557-562 / Proc. Intern. Conf. on Grain Growth in Polycrystalline Materials, Rome 1991	273
A21	D. Gerth and R.A. Schwarzer The development of grain-specific texture and grain boundary character during grain growth of Al-1%Si films on SiO <sub>2</sub> /Si substrates. Materials Science Forum <b>113-115</b> (1993) 619-624 / Proc. Intern. Conf. on Recrystallization and Related Phenomena (Recrystallization '92), San Sebastian 1992	126
A22	D. Gerth and R.A. Schwarzer The effect of grain-specific texture on hillock growth in Al-1%Si films on SiO <sub>2</sub> /Si substrates. Materials Science Forum <b>113-115</b> (1993) 625-630 / Proc. Intern. Conf. on Recrystallization and Related Phenomena (Recrystallization '92), San Sebastian 1992	246
A23	S. Zaefferer and R.A. Schwarzer Microstructure and local texture of partially recrystallized titanium sheet.	114

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A25	R.A. Schwarzer The determination of local texture by electron diffraction - A tutorial review. Textures and Microstructures <b>20</b> (1993) 7-27	3.495
A26	D. Gerth and R.A. Schwarzer Graphical representation of grain and hillock orientations in annealed Al-1%Si films. Textures and Microstructures <b>21</b> (1993) 177-193	774
A27	R.A. Schwarzer and D. Gerth The effect of grain orientation on the relaxation of thermomechanical stress in Al-1%Si conductor layers on SiO <sub>2</sub> /Si substrates. Journal of Electronic Materials <b>22</b> (1993) 607-610 <a href="https://doi.org/10.1007/BF02666405">https://doi.org/10.1007/BF02666405</a>	1.039
A28	R.A. Schwarzer Texture distributions imaged by energy dispersive x-ray diffraction. Steel Research <b>64</b> (1993) 570-574	1.157
A29	R.A. Schwarzer A CCD camera system for the acquisition of backscatter Kikuchi patterns on an SEM. Materials Science Forum <b>157-162</b> (1994) 187-188 / Proc. ICOTOM 10, Clausthal 1993	100
A30	R.A. Schwarzer and S. Zaefferer An inexpensive CCD camera system for recording and on-line interpretation of TEM Kikuchi patterns. Materials Science Forum <b>157-162</b> (1994) 189-194 / Proc. ICOTOM 10, Clausthal 1993	312
A31	R.A. Schwarzer and S. Zaefferer On-line interpretation of SAD channeling patterns. Materials Science Forum <b>157-162</b> (1994) 195-200 / Proc. ICOTOM 10, Clausthal, 1993	176
A32	R.A. Schwarzer Preparation of high-resistance or sensitive samples for grain orientation measurements with electron microscopes. Materials Science Forum <b>157-162</b> (1994) 201-206 / Proc. ICOTOM 10, Clausthal 1993	272
A33	S. Zaefferer and R.A. Schwarzer On-line determination of complete deformation systems for cubic and hexagonal crystals in the TEM. Materials Science Forum <b>157-162</b> (1994) 241-246 / Proc. ICOTOM 10, Clausthal 1993	383
A34	S. Zaefferer and R.A. Schwarzer On-line interpretation of spot and Kikuchi patterns. Materials Science Forum <b>157-162</b> (1994) 247-250 / Proc. ICOTOM 10, Clausthal 1993	188
A35	W. Xia and R.A. Schwarzer	300

	PC program for the calculation of ODF from SAD pole figures or from individual grain orientations. Materials Science Forum <b>157-162</b> (1994) 487-492 / Proc. ICOTOM 10, Clausthal 1993	
A36	M. Barthel, D. Gerth, R.A. Schwarzer, P. Klimanek, and U. Messerschmidt Individual grain orientation relations after high-speed hot rolling of steel rods. Materials Science Forum <b>157-162</b> (1994) 1131-1136 / Proc. ICOTOM 10, Clausthal 1993	479
A37	D. Gerth, S. Zaefferer, and R.A. Schwarzer Stress-induced grain growth in thin Al-1% Si films on SiO <sub>2</sub> /Si substrates. Materials Science Forum <b>157-162</b> (1994) 1205-1210 / Proc. ICOTOM 10, Clausthal 1993	1.304
A38	K. Helming and R.A. Schwarzer Texture estimate from minimum ranges of SAD pole figures. Materials Science Forum <b>157-162</b> (1994) 1219-1224 / Proc. ICOTOM 10, Clausthal 1993	264
A39	S. Zaefferer, D. Gerth, and R.A. Schwarzer Determination of local texture and deformation systems in TiAl <sub>6</sub> V <sub>4</sub> and T40. Materials Science Forum <b>157-162</b> (1994) 1319-1324 / Proc. ICOTOM 10, Clausthal 1993	523
A40	D. Gerth and R.A. Schwarzer Local mechanical properties in thin Al layers on Si substrates calculated from measured grain orientations. Materials Science Forum <b>157-162</b> (1994) 1571-1576 / Proc. ICOTOM 10, Clausthal 1993	240
A41	K. Helming, R.A. Schwarzer, B. Rauschenbach, S. Geier, B. Leiss, H.-R. Wenk, K. Ullemeyer, and J. Heinitz Texture estimates by means of components. Z. Metallkunde <b>85</b> (1994) 545-553	1.627
A42	M. Wehrhahn and R.A. Schwarzer Crystal texture mapping by energy dispersive x-ray diffraction. Z. Metallkunde <b>85</b> (1994) 581-584	321
A43	S. Zaefferer and R.A. Schwarzer Automated measurement of single grain orientations in the TEM. Z. Metallkunde <b>85</b> (1994) 585-591	403
A44	D. Gerth, D. Katzer, and R.A. Schwarzer The influence of local thermomechanical stress on grain growth in thin Al-1%Si layers on SiO <sub>2</sub> /Si substrates. Physica status solidi (a) <b>146</b> (1994) 299-316	1.360
A45	R.A. Schwarzer and S. Zaefferer Automated measurement of grain orientations and on-line determination of complete deformation systems with a TEM. Advances in X-Ray Analysis <b>38</b> (1995) 377-381	235
A46	R.A. Schwarzer and M. Wehrhahn Scanning x-ray apparatus for crystal texture mapping and micro-fluorescence analysis.	115

	Advances in X-Ray Analysis <b>38</b> (1995) 383-385	
A47	R.A. Schwarzer, S. Zaefferer, and K. Kunze The characterization of microtexture by orientation mapping. Advances in X-Ray Analysis <b>38</b> (1995) 547-550	144
A48	K. Helming, B. Rauschenbach, and R.A. Schwarzer Analysis of crystallographic texture in small sample areas. Textures and Microstructures <b>26-27</b> (1996) 111-124	899
A49	R.A. Schwarzer The study of crystal texture by electron diffraction on a grain-specific scale. Microscopy and Analysis <b>45</b> (1997) 35-37	1.574
A50	R.A. Schwarzer and M. Wehrhahn X-ray scanning apparatus for mapping texture and element distributions. Textures and Microstructures <b>29</b> (1997) 65-76	918
A51	R.A. Schwarzer Advances in crystal orientation mapping with SEM and TEM. Ultramicroscopy <b>67</b> (1997) 19-24	444
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A53	R.A. Schwarzer and J. Sukkau Automated crystal orientation mapping (ACOM) with a computer-controlled TEM by interpreting transmission Kikuchi patterns. Materials Science Forum <b>273-275</b> (1998) 215-222	702
A54	B. Schäfer and R.A. Schwarzer SAD pole figures in transmission and reflection using a high-grade CCD camera as an area detector. Materials Science Forum <b>273-275</b> (1998) 223-228	137
A55	A.H. Fischer and R.A. Schwarzer X-ray pole figure measurement and texture mapping of selected areas using an x-ray scanning apparatus. Materials Science Forum <b>273-275</b> (1998) 255-262	547
A56	A.H. Fischer, D. Weirauch, and R.A. Schwarzer Peltier-cooled solid state drift-chamber detector for energy dispersive x-ray pole-figure measurement and texture mapping. Materials Science Forum <b>273-275</b> (1998) 263-269	670
A57	A. Huot, R.A. Schwarzer, and J.H. Driver Texture of shear bands in Al-Mg3% (AA5182) measured by BKD. Materials Science Forum <b>273-275</b> (1998) 319-326	493
A58	A. Ziegenbein, H. Neuhäuser, J. Thesing, R. Ritter, H. Wittich, E. Steck, F. Springer, and R.A. Schwarzer Investigations on local plasticity of CuAl polycrystals by in-situ observations and FEM simulations. Materials Science Forum <b>273-275</b> (1998) 363-368	264
A59	M. Lepper, A. von Glasow, D. Piscevic, and R.A. Schwarzer Crystal texture and electromigration damage in Al-based interconnect lines studied by ACOM with the SEM. Materials Science Forum <b>273-275</b> (1998) 573-577	193
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A61	R.A. Schwarzer Local crystal textures: experimental techniques and future trends. Fresenius J. Anal. Chem. <b>361</b> (1998) 522-526	451
A62	R.A. Schwarzer Crystallography and microstructure of thin films studied by X-ray and electron diffraction. Materials Science Forum <b>287-288</b> (1998) 23-60 Proc. 6th Intern. Symposium on Trends and New Applications of Thin Films, Regensburg 18 - 20 March 1998	911
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A64	H.J. Bunge and R.A. Schwarzer Orientierungsstereologie - ein neuer Zweig der Texturforschung. TU Contact <b>2</b> (1998) 67-73	2.093
A65	S. Kittelberger, U. Bolz, R.P. Huebener, B. Holzapfel, L. Mex, and R.A. Schwarzer Transient local resistivity maximum during temperature dependent oxygen diffusion in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films. Physica C <b>312</b> (1999) 7-20	2.887
A66	R. Schwarzer and A.H. Fischer Ortsaufgelöste Textur- und Gitterdehnungsanalyse mit einer Röntgenrasterapparatur. TU Contact <b>5</b> (1999) 49-53	1.682
A67	R.A. Schwarzer and A. Huot The study of microstructure on a mesoscale by ACOM. Crystal Research and Technology <b>35</b> (2000) 851-862	208
A68	A.K. Singh and R.A. Schwarzer Texture and anisotropy of mechanical properties in Titanium and its alloys. Z. Metallkunde <b>91</b> (2000) 702-716	8.469
A69	R.A. Schwarzer, A.K. Singh, and J. Sukkau Discrimination and mapping of phase distributions by ACOM. Materials Science and Technology <b>16</b> (2000) 1389-1392	1.657
A70	R.A. Schwarzer Measurement of macro-texture by ACOM - an alternative to XRD. Materials Science and Technology <b>16</b> (2000) 1384-1388	1.556
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A72	A.K. Singh and R.A. Schwarzer Effect of mode of deformation by rolling on the development of texture in binary Ti-Mn alloys. Scripta Materialia <b>44</b> (2001) 375-380	606
A73	A.K. Singh and R.A. Schwarzer Texture of hot rolled and annealed binary Ti-Mn alloys. Z. Metallkunde <b>92</b> (2001) 184-190	3.929
A74	A.K. Singh and R.A. Schwarzer Evolution of cold rolling texture in the binary alloys Ti-0.4Mn and Ti-1.8 Mn.	349

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A75	R.A. Schwarzer EBSD studies of interconnect lines. Revue de Métallurgie - SF2M - <b>JA2001</b> (2001) 65	181
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A77	R.A. Schwarzer and J. Sukkau Automated evaluation of Kikuchi Patterns by means of Radon and Fast Fourier Transformations, and verification by an Artificial Neural Network. Advanced Engineering Materials <b>5</b> (2003) 601-606	268
A78	I.V. Gervas'eva, B.K. Sokolov, R.A. Schwarzer, V.V. Gubernatorov, and Ya.V. Podkin Effect of the initial grain size on the structural inhomogeneity and texture formation upon cold rolling and annealing of the Fe-3% Si alloy. The Physics of Metals and Metallography <b>96</b> Suppl. 1 (2003) S43-S52	1.044
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A80	J. Pospiech, M. Ostafin, and R.A. Schwarzer Microstructural aspects of crossrolling of copper. Inzynieria Matrialowa <b>24</b> (2003) 802-805	373
A81	Z. Jasiński, J. Pospiech, R. Schwarzer, A. Piątkowski, and A. Litwora Inhomogeneity of deformation induced by the change of deformation path in channel-die compressed (112)[11-1] copper single crystals. Inzynieria Matrialowa <b>25</b> (2004) 359-363	513
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A84	M. Ostafin, J. Pospiech, and R.A. Schwarzer Microstructure and texture in copper sheets after reverse and cross rolling. Solid State Phenomena <b>105</b> (2005) 309-314	404
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A91	R.A. Schwarzer Automated crystal orientation measurement by backscatter Kikuchi diffraction. Z. Kristallographie Suppl. <b>23</b> (2006) 163-168	108
A92	J. Pospiech, M. Ostafin and R. Schwarzer The effect of the rolling geometry on the texture and microstructure in AZ31 and copper. Archives of Metallurgy and Materials <b>51</b> (2006) 37-42	483
A93	A.K. Singh and R.A. Schwarzer Development of cold rolling texture in the binary Ti-0.4Mn alloy. Metals Materials and Processes <b>18</b> (2006) 351-360	578
A94	B.K. Sokolov, I.V. Gervas'eva, D.P. Rodionov, R.A. Schwarzer, and Ya.V. Podkin Effect of deformation inhomogeneities on the formation of texture during cold rolling and annealing of nickel single crystals. The Physics of Metals and Metallography <b>102</b> (2006) 439-451	517
A95	R.A. Schwarzer The preparation of Mg, Cd and Zn samples for crystal orientation mapping with BKD in an SEM. Microscopy Today <b>15</b> /March (2007) 40, 42	368
A96	H.-G. Brokmeier, S. Lenser, R. Schwarzer, V. Ventzke, S. Riekehr, M. Kocak, and J. Homeyer Crystallographic texture of dissimilar laser welded Al5083-Al6013 sheets. Materials Science Forum <b>539-543</b> (2007) 3894-3899	1.767
A97	A.K. Singh and R.A. Schwarzer Evolution of texture during thermomechanical processing of titanium and its alloys. Trans. Indian Institute of Metals <b>61</b> (2008) 371-387	621
A98	R.A. Schwarzer Spatial resolution in ACOM – What will come after EBSD. Microscopy Today <b>16</b> /January (2008)	196
A99	R.A. Schwarzer A fast ACOM/EBSD system. Archives of Metallurgy and Materials <b>53</b> (2008) 5-10	155
A100	R.A. Schwarzer and J. Hjelen High-speed orientation microscopy with offline solving sequences of EBSD patterns. Solid State Phenomena <b>160</b> (2010) pp 295-300	116



A101	R.A. Schwarzer Orientation microscopy with Fast EBSD. Materials Science and Technology <b>26</b> (2010) 646-649	107
A102	J. Sukkau and R.A. Schwarzer Reconstruction of Kikuchi patterns by intensity-enhanced Radon transformation. Pattern Recognition Letters <b>33</b> (2012) 739–743	390
A103	Robert A. Schwarzer and Johann Sukkau Electron Back Scattered Diffraction: Current state, prospects and comparison with X-ray diffraction texture measurement. The Banaras Metallurgist <b>18</b> (2013) 1-11	219
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A105	R.A. Schwarzer and Jarle Hjelen Backscattered Electron Imaging with an EBSD Detector. Microscopy Today <b>23</b> (2015) 12-17	2.062
A106	R. Schwarzer and C. Esling Texture et anisotropie des matériaux polycristallins - Cartographie par diffraction de Kikuchi. Techniques de l'ingénieur - Mise en forme des métaux et fonderie: M3040 V2 (2021) 1-16 & DOC M3040 V2 (2021) 1-3 DOI 10.51257/a-v2-m3040  R. Schwarzer and C. Esling Kikuchi diffraction patterns and orientation microscopy. 2024 English web version of M3040 DOI 10.51257/a-v2-m3040	2.163
A107	C. Esling and R. Schwarzer Texture et anisotropie des matériaux polycristallins - Diffraction RX, rayonnement synchrotron et neutrons. Techniques de l'Ingénieur - Mise en forme des métaux et fonderie: M3039 v1 (2022) 1-32 & DOC M3039 v1 (2022) 1-3 DOI 10.51257/a-v1-m3039  C. Esling and R. Schwarzer X-ray diffraction, synchrotron radiation and neutrons 2025 English web version of M3039 DOI 10.51257/a-v1-m3039	(preprint) (5984)
<b>Conference Proceedings</b>		
C1	R. Schwarzer, W. Leiser, and K.H. Gaukler Untersuchungen mit dem Photoemissions-Elektronenmikroskop (PhEEM). BEDO (= Beiträge zur elektronenmikroskop. Direktabbildung von Oberflächen) <b>5</b> (1972) 977-986	400
C2	G. Möllenstedt and R. Schwarzer Erste Erfahrungen mit einer Ringblende im Emissions-Elektronenmikroskop Metioskop KE3. BEDO <b>6</b> (1973) 495-506	419
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C5	J. Hofmeister and R. Schwarzer Der vektorielle Photoeffekt im Photoemissions-Elektronenmikroskop. BEDO <b>9</b> (1976) 167-184	1.455
C6	R. Schwarzer Transmissions-Kikuchi-Diagramme und Aufnahmen im konvergenten Elektronenbündel an epitaktisch aufgedampften Kupferschichten. BEDO <b>10</b> (1977) 195-202	643
C7	K. Drescher and R. Schwarzer Der Kontrast im Photoemission-Elektronenmikroskop bei der Auslösung durch kurz- und langwellige UV-Strahlung. BEDO <b>10</b> (1977) 735-744	1.240
C8	U. Fritz and R. Schwarzer Erhöhung des Kontrastes und der Bildhelligkeit im Photoemissions-Elektronenmikroskop durch Gasbelegungen auf Kupfer. BEDO <b>10</b> (1977) 745-764	1.364
C9	R. Schwarzer and K.H. Gaukler Long working distance ion gun using a field-ionization source. Proc. 7th Intern. Vacuum Congress & 3rd Intern. Conference on Solid Surfaces, Vienna 1977, p. 2547-2549	93
C10	R. Schwarzer, J.I. Cisneros, and Z.P. Argüello Messung der photoelektrischen Ausbeute und der Energieverteilung von Photoelektronen aus LiF-Einkristallen im Photoemissions-Elektronenmikroskop (PEEM). BEDO <b>11</b> (1978) 209-214	341
C11	R.A. Schwarzer Physical aspects of emission electron microscopy. Proc. 1st EEM Conference, Tübingen 1979 / BEDO <b>12/2</b> (1979) 3-38	1.304
C12	R.A. Schwarzer Evidence for vectorial photoelectric effect from PEEM study of biological thin sections. Proc. 1st EEM Conference, Tübingen 1979 / BEDO <b>12/2</b> (1979) 165-170	805
C13	R.A. Schwarzer Determination of fibre textures in thin gold films by evaluating pole figures with the TEM. Proc. 10th Intern. Congress Electron Microscopy, Hamburg 1982, Vol. 2, p. 129-130	557
C14	R. Schwarzer Intensitätskorrektur für die Messung von Polfiguren im TEM. BEDO <b>16</b> (1983) 131-134	182
C15	R.A. Schwarzer and H. Weiland Computer-aided indexing of Kikuchi patterns from cubic, tetragonal, and hexagonal crystals in the determination of grain orientations. Proc. 8th Europ. Congr. EM (EUREM 1984), Budapest 1984, p. 341-342	177
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