

Cubic以外の解析 E B S D データから配向関数計算

T e t r a g o n a l C u F e S 2

MTEX5.1.1/data/EBSD/olivineopticalmap.ang

2023年03月28日

H e l p e r T e x O f f i c e

Angデータ変換(複数相からCuFeS2を選択)

The screenshot shows the EBSDtoODF software interface. The 'InputData' section has 'InputFile' set to 'C:\mtex-5.1.1\data\EBSD\olivineopticalmap.ang'. The 'MaterialData' section has 'Material' set to 'cif' and '.TXT .cif file'. The 'Group' is 'P1', 'Symmetry(OIM)' is '42', 'HKLCode' is '5', and 'LaboTex' is 'AllPhase'. The 'Aaxis' is '5.24', 'Baxis' is '5.24', 'Caxis' is '10.3', 'alpha' is '90.0', 'beta' is '90.0', and 'gamma' is '90.0'. A list of phases is shown below, with 'Chalcopyrite' selected. The 'Makefile' section at the bottom has 'DataStartline' set to '180', 'PhasePotision' set to '8', and 'LaboTex-SOR' selected. The 'Holder' is 'C:\mtex-5.1.1\data\EBSD\olivineopticalmapEtoO.SOR'. The 'SOR Variance' is '15 deg.>= Step 5.0'. The 'Filemake' button is visible.

Phase	Intensity	Area	Volume	Weight	Phase	Intensity	Area	Volume	Weight
183	1.64198	2.64795	1.39764	12.00000	0.00000	184750.5	0.263	1	0
184	1.64511	2.64658	1.40167	16.00000	0.00000	190592.6	0.425	1	0
185	1.65003	2.65055	1.40223	20.00000	0.00000	175735.8	0.281	1	0
186	1.64906	2.64736	1.40763	24.00000	0.00000	164054.9	0.282	1	0
187	1.64619	2.64662	1.40882	28.00000	0.00000	170213.3	0.420	1	0
188	1.65036	2.64843	1.41355	32.00000	0.00000	173071.2	0.360	1	0
189	1.64426	2.65091	1.40409	36.00000	0.00000	105087.5	0.205	1	0
190	6.01848	0.47948	0.86507	40.00000	0.00000	53562.4	0.001	3	0
191	1.02674	1.55019	5.37942	44.00000	0.00000	43186.9	0.025	1	0
192	1.76871	1.76511	4.64990	48.00000	0.00000	42109.0	0.007	1	0
193	6.27863	1.34746	1.31240	52.00000	0.00000	35992.3	0.000	1	0
194	4.36202	1.44591	5.43568	56.00000	0.00000	76183.5	0.060	1	0
195	4.36117	1.44460	5.43966	60.00000	0.00000	153203.4	0.533	1	0
196	4.35841	1.44285	5.44178	64.00000	0.00000	200322.3	0.315	1	0
197	4.35997	1.44273	5.44119	68.00000	0.00000	214971.7	0.466	1	0
198	4.36095	1.44459	5.43964	72.00000	0.00000	202979.6	0.463	1	0
199	4.36150	1.44219	5.43721	76.00000	0.00000	159648.7	0.614	1	0
200	4.43858	0.84443	4.99301	80.00000	0.00000	71151.6	0.001	1	0

The close-up shows the 'Makefile' section. The 'DataStartline' is '180', 'PhasePotision' is '8', and 'LaboTex-SOR' is selected in the dropdown menu. The 'Holder' is 'C:\mtex-5.1.1\data\EBSD\olivineopticalmapEtoO.SOR'. The 'Step' is '5.0'. The 'Filemake' button is visible.

SOR: LaboTex向け
Ctf: MTEX向け

LaboTex SORファイル作成, LaboTex読み込み

EBSDtoODF 1.02GaussT[23/12/31] by CTR

File Help

InputData
InputFile: C:\mtex-5.1.1\data\EBSD\olivineopticalmap.ang
Chalcopyrite

MaterialData
Material: cif
.TXT .cif file

Group: P1
Symmetry(OIM): 42
HKLCode: 5
LaboTexCode: 5 - D4 (teragonal)

Aaxis: 5.24
Baxis: 5.24
Caxis: 10.3
alpha: 90.0
beta: 90.0
gamma: 90.0

183:	4.5591	2.1189	4.1201	1
184:	1.1542	0.4078	5.6447	1
185:	6.0507	0.8127	1.6050	1
186:	6.0505	0.8145	1.6068	1
187:	6.0524	0.8138	1.6043	1
188:	6.0511	0.8141	1.6053	1
189:	6.0526	0.8132	1.6052	1
190:	6.0482	0.8153	1.6066	1
191:	6.0495	0.8117	1.6067	1
192:	2.9058	2.3300	4.6748	1
193:	2.9042	2.3312	1.5345	1
194:	6.0464	0.8047	1.6087	1
195:	6.0476	0.8091	1.6077	1
196:	2.6517	0.0892	0.3833	1
197:	5.7824	3.0525	2.7461	1
198:	5.7877	3.0512	2.7546	1
199:	5.7692	3.0566	2.7331	1
200:	5.7297	3.0582	2.6995	1

outfiledisp

Makefile
DataStartline: 180
PhasePotision: 8
Selectphase: 1
f1: 1
F: 2
f2: 3
X: 4
Y: 5

LaboTex-SOR
Holder: C:\mtex-5.1.1\data\EBSD\olivineopticalmapEtoO.SOR

SOR Variance
 15 deg.>= Step: 5.0

Filemake: C:\mtex-5.1.1\data\EBSD\olivineopticalmapEtoO.SOR make complete !!

New Sample

Choose Experimental Data (LaboTex Single Orientations Files)
 EPF PFF SOR NJC NJA RW1 epf Selected: 1

ACOMEtO.SOR
dataEtoO.SOR
DC06_2uniaxEtoO.SOR
ForsteriteEtoO.SOR
olivineopticalmapEtoO.SOR
single_grain_aluminumEtoO.SOR

Path: C:\mtex-5.1.1\data\EBSD\
Info: C:\mtex-5.1.1\data\EBSD\olivineopticalmap.ang

Choose Defocussing Correction
 Correction (On/Off)
 Correction Data from File Correction Data from Formula
(COR_POW_DFB_ASC_PFG_NJA_DAT_POL_NJC_COA_RWA_UXD_EXP)
Cor(1x1).cor
Cor(5x5).cor

Path: C:\LaboTex2\USER\CuFeS2.LAB\COR\
Info:

Crystal Symmetry: D4 (Tetragonal)

Project Name: Demo

Sample Name: D4_Tetragonal

Sample Name: CuFeS2

Cancel Create of ODF from Single Orientations Data

LaboTex

100.0 % ODF Creations from Single Orientations

Project: Demo

Sample: CuFeS2

Crystal Symmetry: D4-Tetragonal

Cell Parameters (Relative): a: 1.0, b: 1.0, c: 1.9

Angle Convention for Data: Bunge

Grid Cells for Output ODF: 5.0*5.0

Angle Unit: Radians

Weight: Yes

Phase: 0

Descriptions: C:\mrtex-5.1.1\data\EBSD\oliveopticalmap.ang

Single Orientations Files: [List of files]

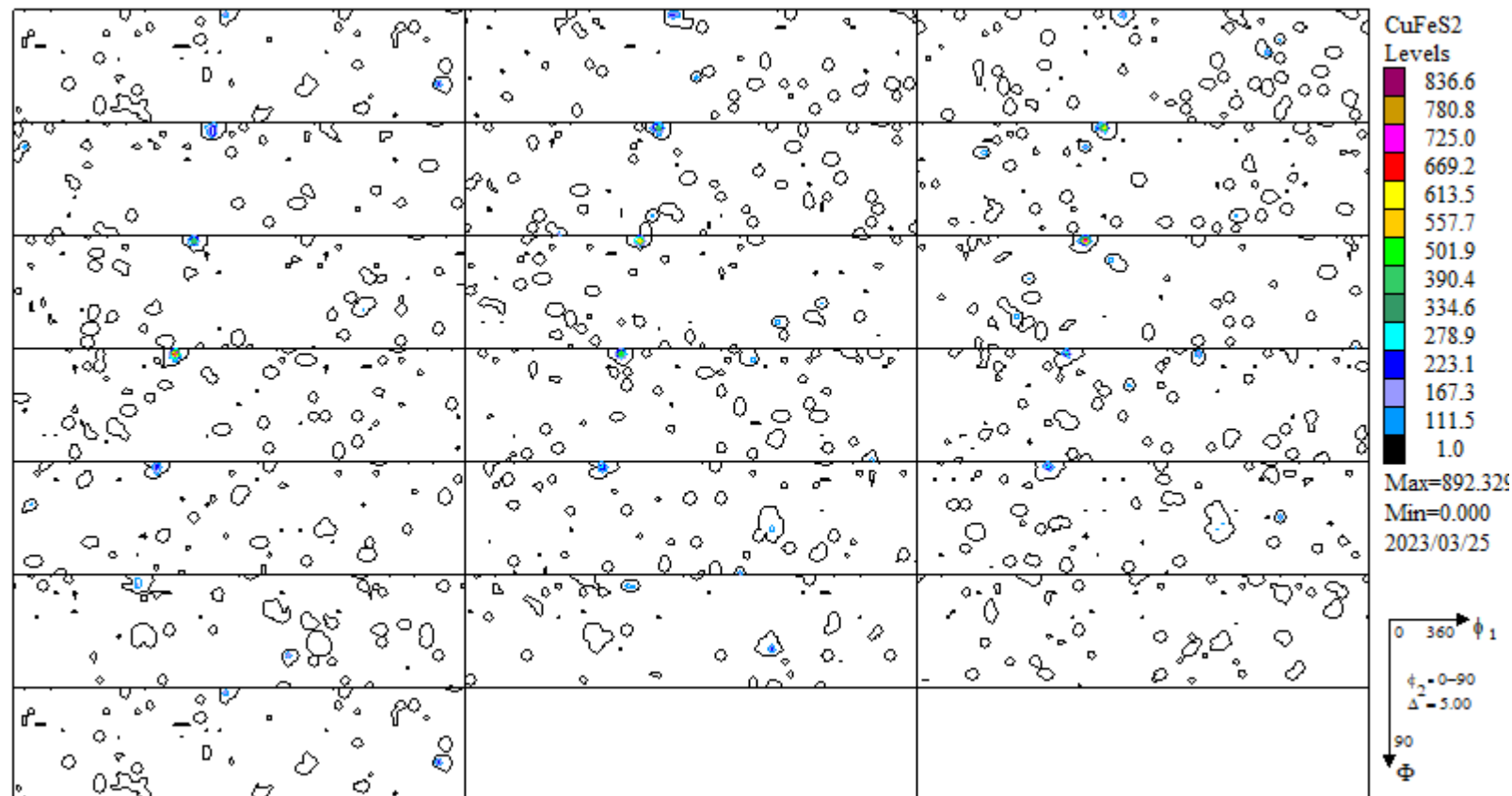
Calculations Progress: Merge (files): 1/1, No of single orien.: 44953, Calculation Finished: 100.0%

'SOR' Output File Options: Add {HKL}<UVW> Max. Value of Miller Indice = 15

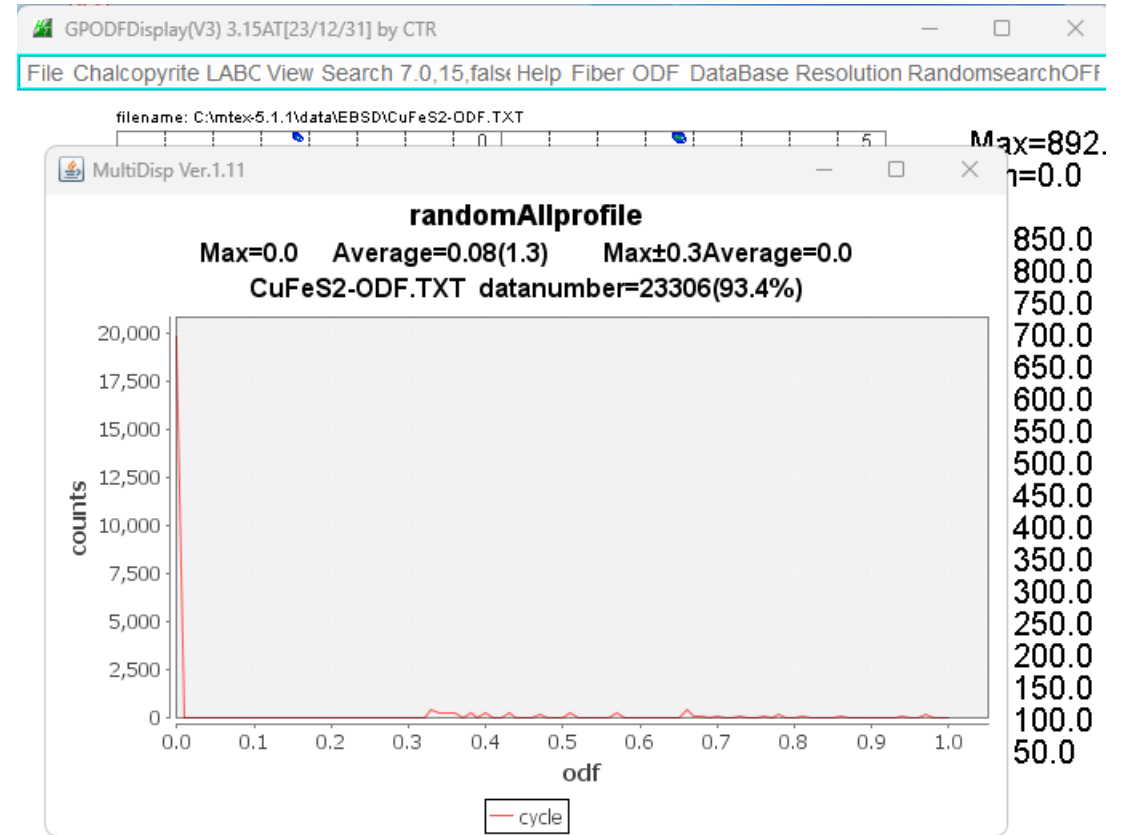
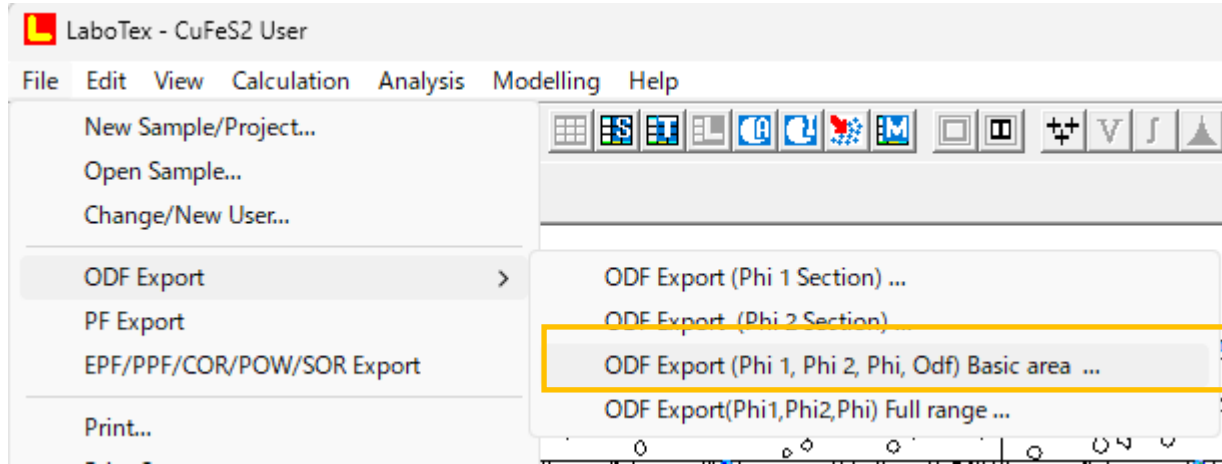
Hexagonal Axis Convention of Data (important only in Hexagonal C.S.):

Warning: If your file contains non-indexed data, then you should use "EBSD Format - Defined by User" (Menu "Edit", "LaboTex Options", "Data Formats")
In this format you can exclude non-indexed data from ODF calculation.
Non-indexed data can create false maximum on the ODF!
In case of problems, please contact the office@labosoft.com.pl

BREAK END

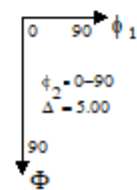
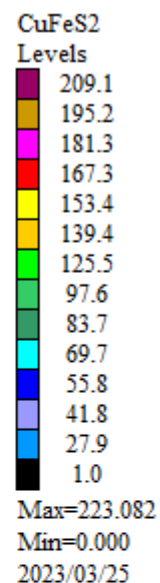
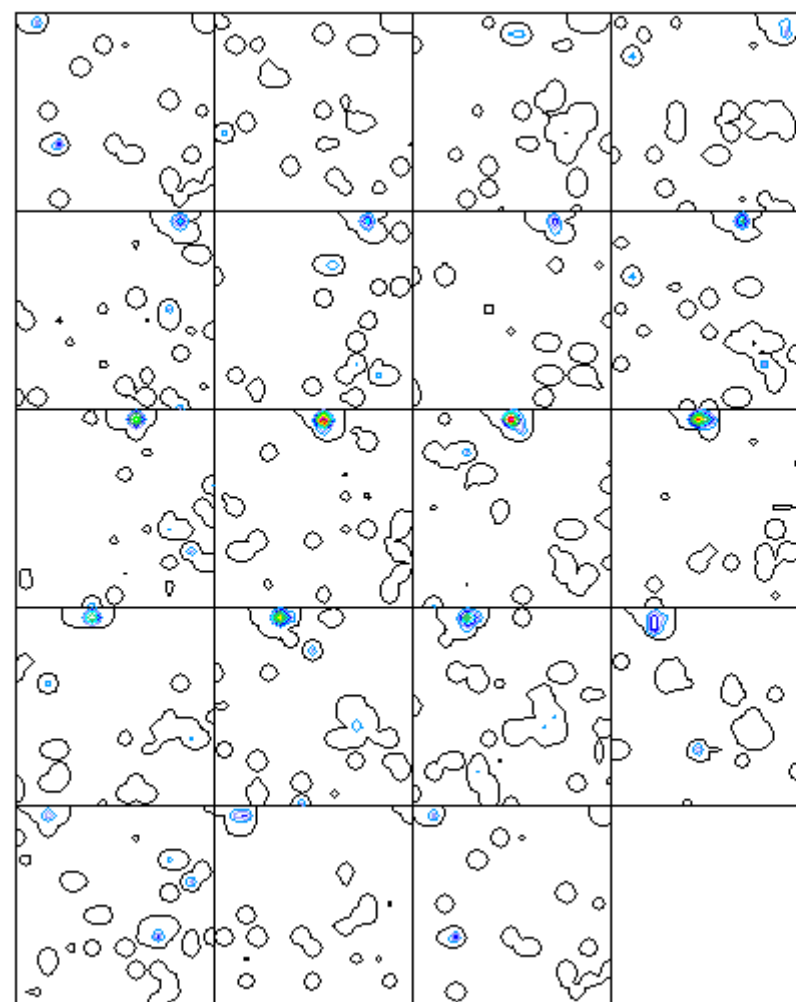
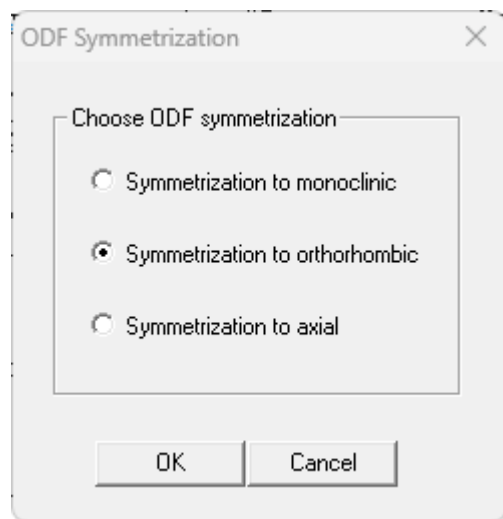
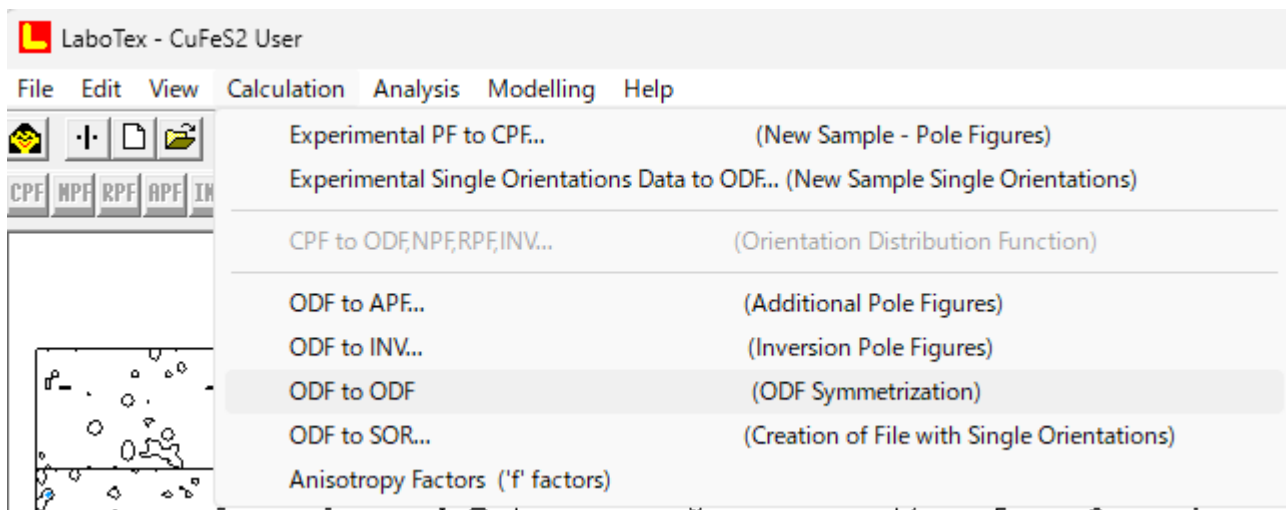


ODF図をExportし、random定量

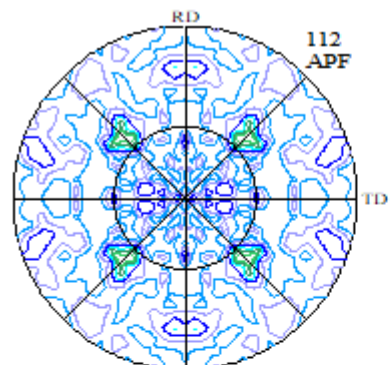


格子点の93.4%が1.0以下でrandom値は0%である。

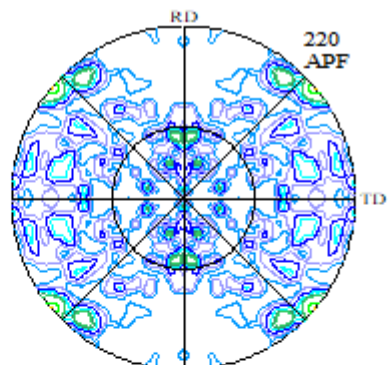
LaboTex Triclinic->Orthorhombic



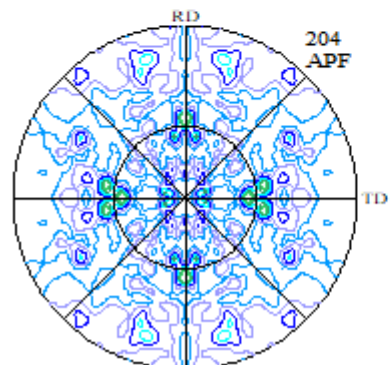
配向関数



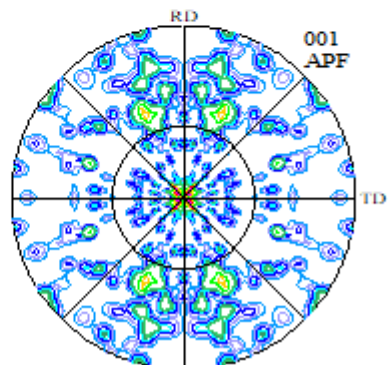
CuFeS2



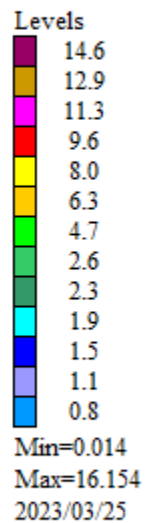
CuFeS2



CuFeS2



CuFeS2



Calculation of Anisotropy Factors

Calculation for Hexagonal, Tetragonal and Orthorhombic Crystal Systems

Fraction of Basal Planes {001} in Sample Directions

LD	TD	ND
0.3702	0.2846	0.3452
f1	f2	f3

Angles between Basal Planes {001} and Sample Directions

LD	TD	ND
50.9	60.0	53.6
a	b	c

Kearns Factors (Fraction in Physical Property)

LD	TD	ND
0.3970	0.2504	0.3525
fL	fT	fN

Texture Index (F2) (normalized) 0.95325
("0" - Random, "1" - Monocrystal)

Calculate

End

{001}極点図をExport

