

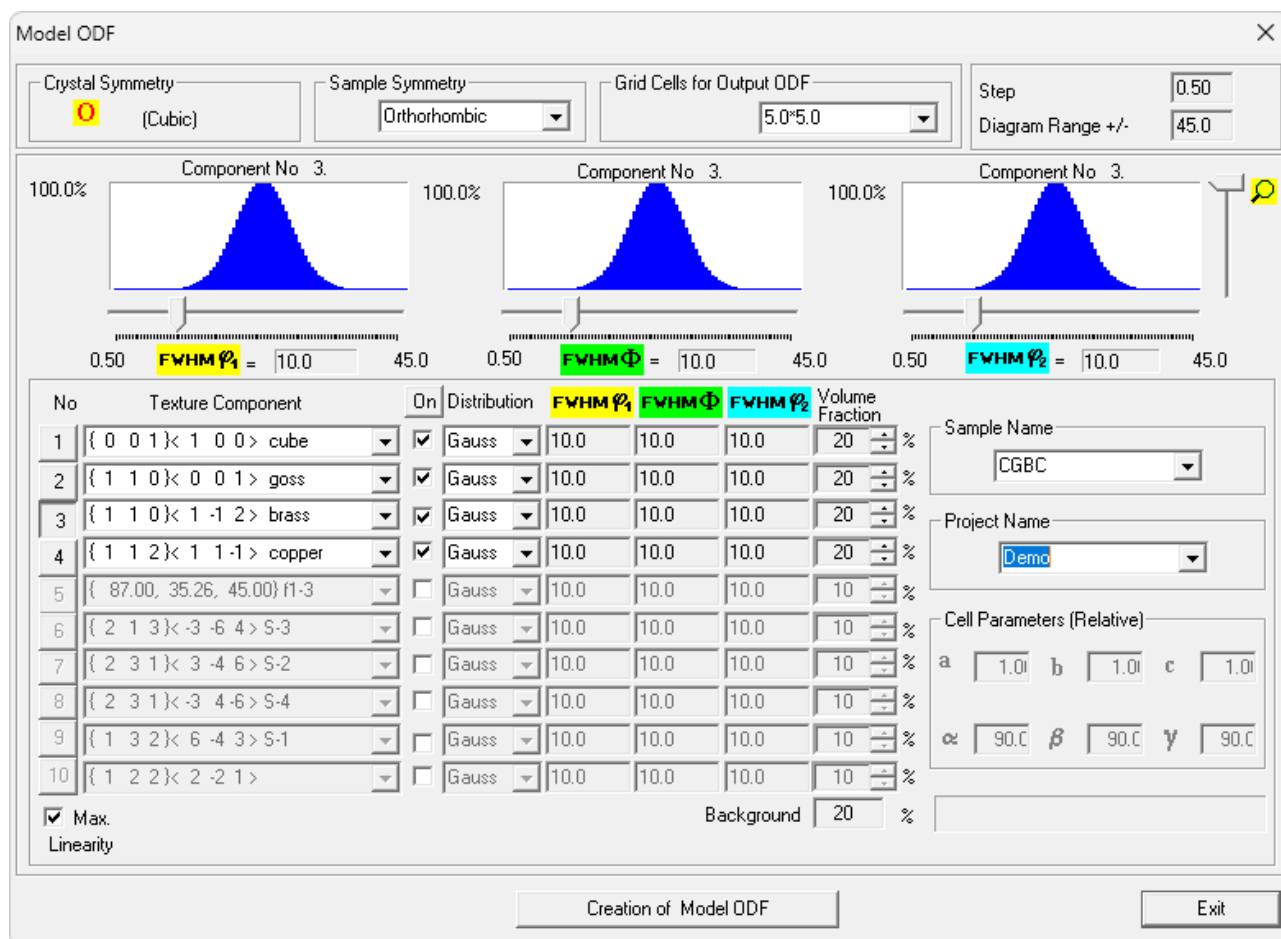
L a b o T e x の V o l u m e F r a c t i o n

2025年06月07日

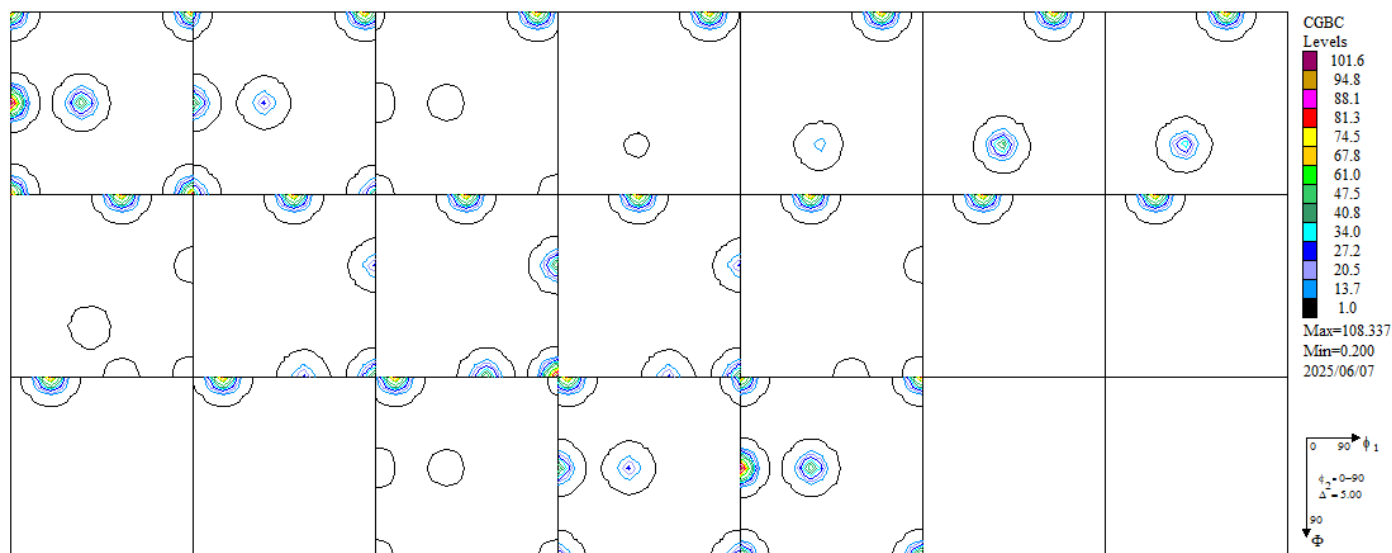
HelperTex Office

概要

LaboTexのVolumeFractionには
 Integration Method
 Model Function Method
 があるがこの違いは



から ODF 図を作成し、調べる。



Orientation Set Name : Set from Database (sort by ODF)

Step Diagram Range +/- CP

Central View Point (Diagrams)

ODF(max) 100.0% BBB

2.50 $\Delta\Phi_1$ = 15.00 45.0

2.50 $\Delta\Phi$ = 15.00 45.0

2.50 $\Delta\Phi_2$ = 15.00 45.0

No	Texture Component	On	$\Delta\Phi_1$	$\Delta\Phi$	$\Delta\Phi_2$	Volume Fraction [%]	[Φ_1 , Φ , Φ_2]
1	{ 1 1 0 } < 0 0 1 > goss	☒	15.00	15.00	15.00	19.91 %	[0.00, 90.00, 0.00] (Sym.Eq.)
2	{ 0 0 1 } < 1 0 0 > cube	☒	15.00	15.00	15.00	19.77 %	[90.00, 90.00, 0.00] (Sym.Eq.)
3	{ 1 1 0 } < 1 -1 2 > brass	☒	15.00	15.00	15.00	21.50 %	[90.00, 0.00, 0.00] (Sym.Eq.)
4	{ 1 1 2 } < 1 1 -1 > copper	☒	15.00	15.00	15.00	19.96 %	[0.00, 0.00, 90.00] (Sym.Eq.)
5	{ 90.00, 32.26, 45.00 } F-3	☐	10.0	10.0	10.0		[0.00, 90.00, 90.00] (Sym.Eq.)
6	{ 90.00, 35.26, 42.00 } f2-3	☐	10.0	10.0	10.0		[90.00, 90.00, 90.00] (Sym.Eq.)
7	{ 87.00, 35.26, 45.00 } f1-3	☐	10.0	10.0	10.0		[90.00, 0.00, 90.00] (Sym.Eq.)
8	{ 87.00, 32.26, 42.00 } all	☐	10.0	10.0	10.0		[1 1 0] < 1 -1 2 > brass
9	{ 5 2 5 } < 1 -5 1 >	☐	10.0	10.0	10.0		[54.74, 90.00, 45.00]
10	{ 0 1 3 } < 1 0 0 >	☐	10.0	10.0	10.0		[35.26, 45.00, 0.00] (Sym.Eq.)

☐ Set Background Manually Background %

The Rest -1.16 %

Orientations Overlap 1.74 %

Overlapping of Sym. Eq. Or. - Strategy

☐ Simple Integration

☒ Singly Counts in Overlapp. Area

☐ Divide by Number of Sym. Equival.

Overlapping of Orientations

☐ Divide ODF Among Overlap. Orien.

Report

Job: 1
Date: 2025/06/07
Time: 07:21:33

Overlapping of Symmetrically Equivalent Orientations - Calculation Strategy:

**** Singly Counts in Overlapping Area ****

Calculation Options:

Divide ODF in Overlap Area Among Overlapping Orientations :

**** Off ****

Volume Fraction	Delta Phi1	Delta Phi	Delta Phi2	Orientation
19.91	15.00	15.00	15.00	{ 1 1 0 } < 0 0 1 > goss
19.77	15.00	15.00	15.00	{ 0 0 1 } < 1 0 0 > cube
21.50	15.00	15.00	15.00	{ 1 1 0 } < 1 -1 2 > brass
19.96	15.00	15.00	15.00	{ 1 1 2 } < 1 1 -1 > copper
20.02	Background Volume Fraction			
-1.16	The Rest Volume Fraction			
1.74	Orientations Overlap Volume Fraction			

Quantitative Analysis - Model Functions Method

Quantitative Analysis - Model Functions Method - Project: Demo Sample:CGBC Job:1

Crystal Symmetry
 (Cubic)

Sample Symmetry
Orthorhombic

Grid Cells for Output ODF
5.0*5.0

Step
Diagram Range +/- 0.50
45.0

100.0%

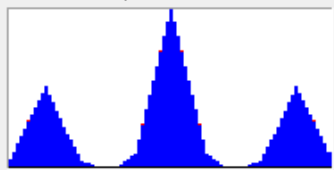
Component No. 1.

Misfit

Good

Backgr.

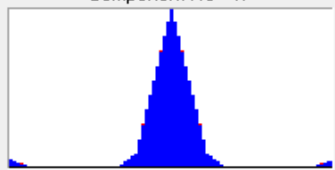
Diff.



-45.0 45.0

100.0%

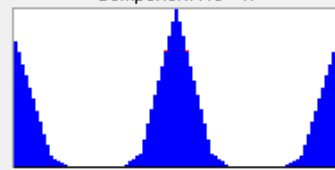
Component No. 1.



-45.0 45.0

100.0%

Component No. 1.



-45.0 45.0

No	Texture Component	On	Distribution	FWHM Φ_1	FWHM Φ_2	FWHM Φ_3	Volume Fraction	Show Sym. Eq.
1	{ 1 1 0 } < 0 0 1 > goss	☒	Gauss	10.0	10.0	10.0	20	% { 1 1 0 } < 0 0 1 > goss
2	{ 0 0 1 } < 1 0 0 > cube	☒	Gauss	10.0	10.0	10.0	20	%
3	{ 1 1 0 } < 1 -1 2 > brass	☒	Gauss	10.0	10.0	10.0	20	%
4	{ 1 1 2 } < 1 1 -1 > copper	☒	Gauss	10.0	10.0	10.0	20	%
5	{ 90.00, 32.26, 45.00 } F-3	☐	Gauss	10.0	10.0	10.0	7	%
6	{ 90.00, 35.26, 42.00 } f2-3	☐	Gauss	10.0	10.0	10.0	7	%
7	{ 87.00, 35.26, 45.00 } f1-3	☐	Gauss	10.0	10.0	10.0	7	%
8	{ 87.00, 32.26, 42.00 } all	☐	Gauss	10.0	10.0	10.0	4	%
9	{ 5 2 5 } < 1 -5 1 >	☐	Gauss	10.0	10.0	10.0	10	%
10	{ 0 1 3 } < 1 0 0 >	☐	Gauss	10.0	10.0	10.0	10	%

☒ Max. Linearity

Orientation Set Set from Database (sort by)

Save Current Set

Background 20

Show Sym. Eq.

Calculation Mode

☒ Automatic
 ☐ Manual

Max. Iteration Number : 1,000

Max. Fit Error % (*1000) : 100

Iteration : 933

Fit Error% (*1000) : 114.

Fit Calculation Progress



Change Initial Parameters

Fix Angles

Fix Fractions

Start Volume Fraction Calculation

View Report

Exit and Show

Exit

LaboTex - Texture - Quantitative Analysis Report (MF Method)

User: test2

Project: Demo

Sample: CGBC

Job: 1

Date:2025/06/07

Time:07:24:23

Volume Fraction	FWHM Φ_1	FWHM Φ_2	FWHM Φ_3	Orientation
Component No 1 - Distribution :Gauss				
19.99	10.0	10.0	10.0	{ 1 1 0 } < 0 0 1 > goss
Component No 2 - Distribution :Gauss				
20.00	10.0	10.0	10.0	{ 0 0 1 } < 1 0 0 > cube
Component No 3 - Distribution :Gauss				
19.97	10.0	10.0	10.0	{ 1 1 0 } < 1 -1 2 > brass
Component No 4 - Distribution :Gauss				
19.97	10.0	10.0	10.0	{ 1 1 2 } < 1 1 -1 > copper
20.07	Background Volume Fraction			