



# Powder Diffraction

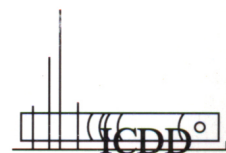
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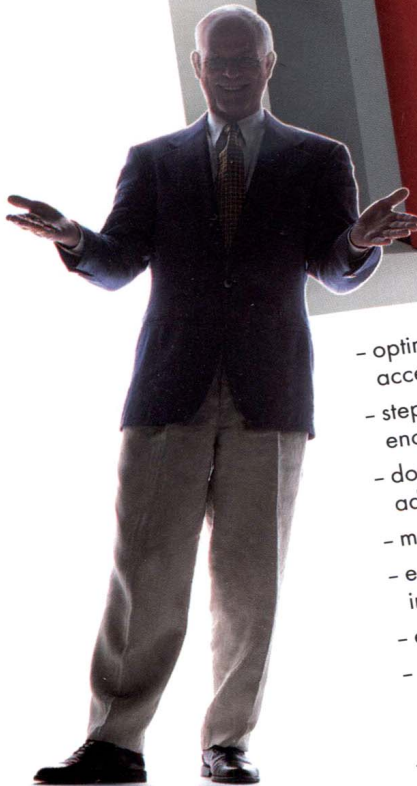
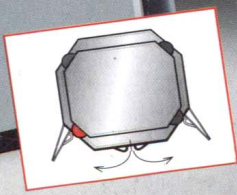
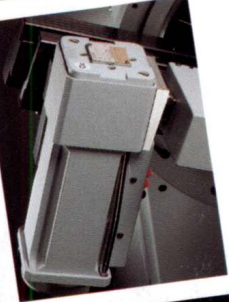
Volume 14 Number 4 December 1999

33-1161  
SiO<sub>2</sub>  
Silicon Oxide  
Quartz, syn

Rad.	CuKα <sub>1</sub>	λ	40598	Filter	Monoc.	d-sp	Diff.	dÅ	Int	hkl	dÅ	Int	hkl
Ref.	Natl. Bur. Stand.							4.257	22	100	1.1532		
								3.342	100	101	1.1405	1	311
								2.457	8	110	1.1143	<1	303
								2.282	8	102	1.0813	<1	312
								2.237	4	111	1.0635	<1	400
								2.127	6	200	1.0476	1	105
								1.9792	4	201	1.0438	<1	401
								1.8179	14	112	1.0347	<1	214
								1.8021	<1	003	1.0150	<1	223
								1.6719	4	202	0.9873	1	402
								1.6591	2	103	0.9873	1	313
								1.6082	<1	210	0.9783	<1	304
								1.5418	9	211	0.9762	1	320
								1.4536	1	113	0.9636	<1	205
								1.4189	<1	300			
								1.3820	6	212			
								1.3752	7	203			
								1.3718	7	301			
								1.2880	8	301			
								1.2558	2	104			
								1.2285	2	302			
								1.1999	1	220			
								1.1978	2	213			
								1.1843	1	221			
								1.1804	3	113			
								1.1804	3	311			

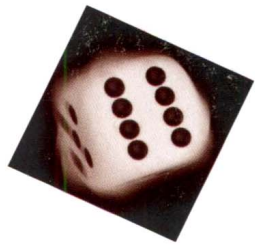
Colorless  
Pattern taken at 25 C. Sample from the Glass Section at NBS.  
Gaithersburg, Maryland, USA, ground single-crystals of optical qual-  
ity. Pattern reviewed by Holzner, McCarthy, G., North Dakota State  
University, Fargo, North Dakota, USA, ICDD Grant-in-Aid (1990).  
Agrees well with experimental and calculated patterns. O,Si type.  
Quartz group. Also called: silica. Also called: low quartz. Silica used  
as internal standard. PSC: hP9. To replace 5-490 and validated by cal-  
culated pattern. Plus 6 additional reflections to 0.9089.





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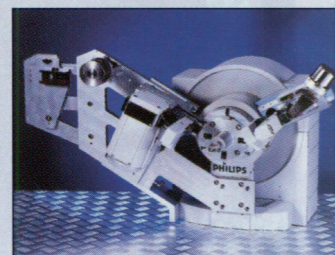
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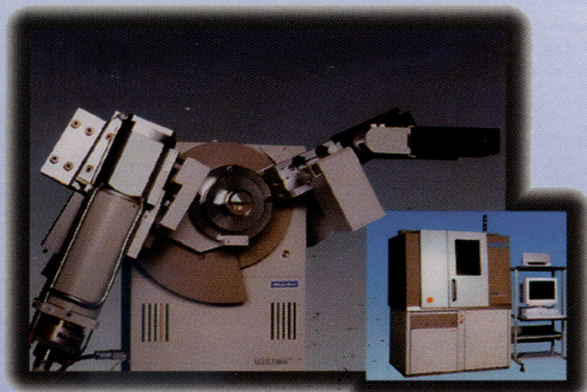
*Powder Diffraction* (ISSN: 0885-7156) is published quarterly (4X annually) by the JCPDS-International Centre for Diffraction Data through the American Institute of Physics. 1999 Subscription rates: US\$105. POSTMASTER: Send address changes to *Powder Diffraction*, AIP Circulation & Fulfillment Division, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502. Periodicals postage paid at Huntington Station, NY 11746, and additional mailing offices.

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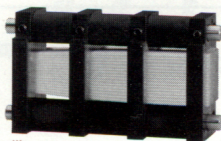


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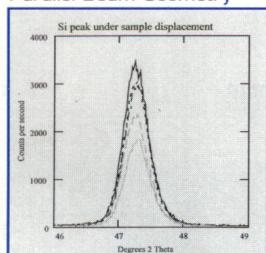
J. A. Henao, A. Palma, V. V. Kouznetsov, and J. M. Delgado	X-ray powder diffraction data for two new N-substituted 3,4-dihydrospiro-2(1H) quinolines	249
C. N. W. Darlington	An X-ray diffraction study of AgNbO <sub>3</sub> and comparison with NaNbO <sub>3</sub>	253
W. Paszkowicz	X-ray powder diffraction data for indium nitride	258
J. A. Kaduk, J. J. Harper	Crystal structure of an unusual corrosion deposit, <i>bis</i> (ethylammonium) tetrachloroiron(II)	261
Jordi Rius	XLENS, a direct methods program based on the modulus sum function: Its application to powder data	267
X. L. Chen, W. Eysel	Subsolidus phase relations in La <sub>2</sub> O <sub>3</sub> -Bi <sub>2</sub> O <sub>3</sub> -CuO	274
Wiesław Łasocho, Wiesław Surga, and Alicja Rafalska-Łasocho	X-ray powder diffraction studies of fibrillar zinc trimolybdates ZnMo <sub>3</sub> O <sub>10</sub> . <i>n</i> H <sub>2</sub> O ( <i>n</i> =3.75,5,10)	276
A. Rafalska-Łasocho, W. Łasocho, and M. Michalec	X-ray powder diffraction data of anilinium trimolybdate tetrahydrate and anilinium trimolybdate dihydrate	280
Hoong-Kun Fun, Ping Yang, Minoru Sasaki, Masasi Inoue, and Hideoki Kadomatsu	Rietveld refinement of the crystal structure of $\gamma$ -Mo <sub>4</sub> O <sub>11</sub>	284
V. V. Chernyshev, A. V. Yatsenko, V. A. Tafeenko, E. J. Sonneveld, H. Schenk, and V. A. Makarov	Crystal and molecular structure of 1-amino-4-methoxycarbonyl-3-methyl-8-oxopyrazolo[1,5- <i>a</i> ]pyrimidine monohydrate from laboratory powder data	289
B. Gérard, A. Blyr, A. Du Pasquier, and L. Seguin	X-ray device for continuous in situ electrochemical study of plastic Li-ion cells	293
Charles Buckner, Christopher Kidd, Stacey Long, Peter Varlashkin, and Jim Zhu	Environmentally controlled sample stage for Scintag's six-position XRD sample changer	296
Ľubomír Smrčok, Marián Ďurík, and Vladimír Jorík	Wavelet denoising of powder diffraction patterns	300
Rodney T. Tettenhorst, Roger E. Gerkin	X-ray powder diffraction data for ammonium hydrogen (acid) urate, NH <sub>4</sub> C <sub>5</sub> H <sub>3</sub> N <sub>4</sub> O <sub>3</sub>	305
International Reports		
	Message from the Editor	308
	Regional Reports	308
	Calendar of Meetings	312
	Short Courses & Workshops	315
	Announcement	317
Index to Volume 14		
	Subject Classification Scheme Used in Volume 14	318
	Subject Index to Volume 14	319
	Author Index to Volume 14	323

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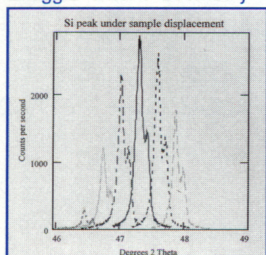


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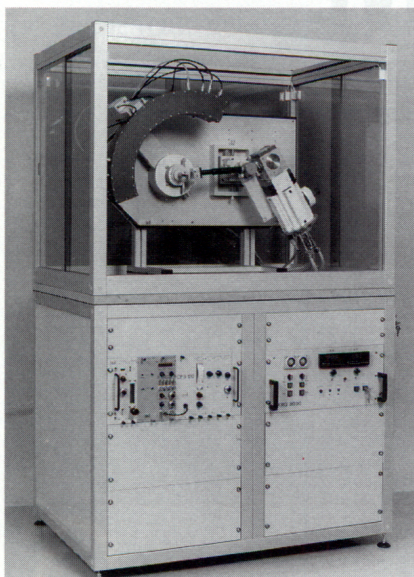
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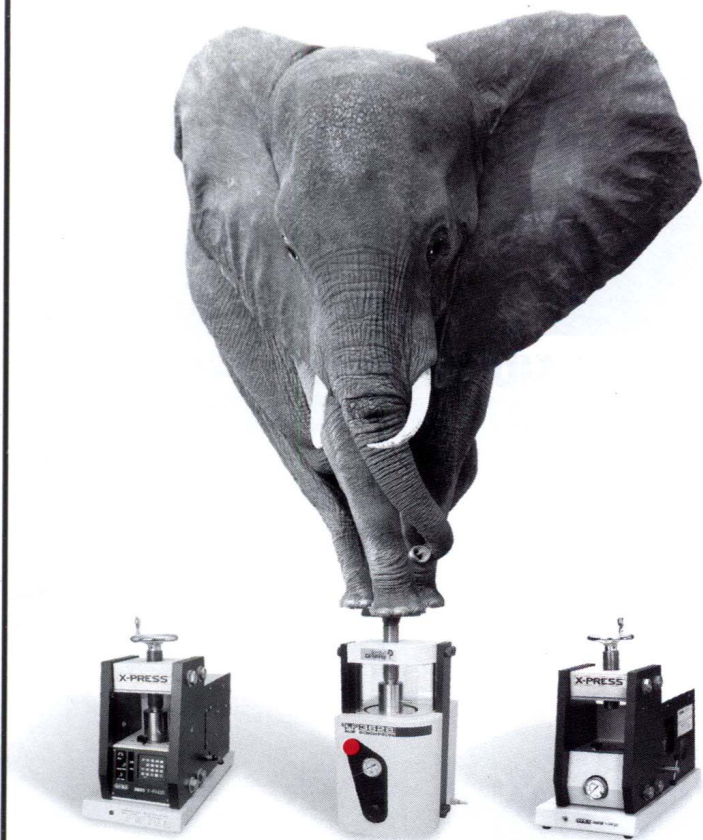
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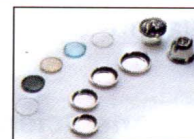
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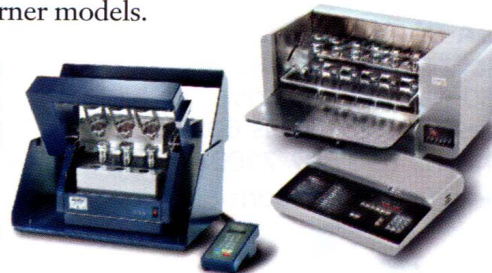
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37.39%	43-1484 Aluminum Oxide (Corundum, syn)
22.45%	05-0664 Zinc Oxide (Zincite, syn)
18.88%	47-1743 Calcium Carbonate (Calcite)
21.28%	21-1276 Titanium Oxide (Rutile, syn)

MNI: 0.42    Std. Deviation: 0.027    Density: 4.25  
Volume Fraction: 0.20    Std. Deviation: 0.016    RIR: 3.40  
Weight Fraction: 0.21    Std. Deviation: 0.017    Peaks used: 6  
Figure of Merit: 0.040

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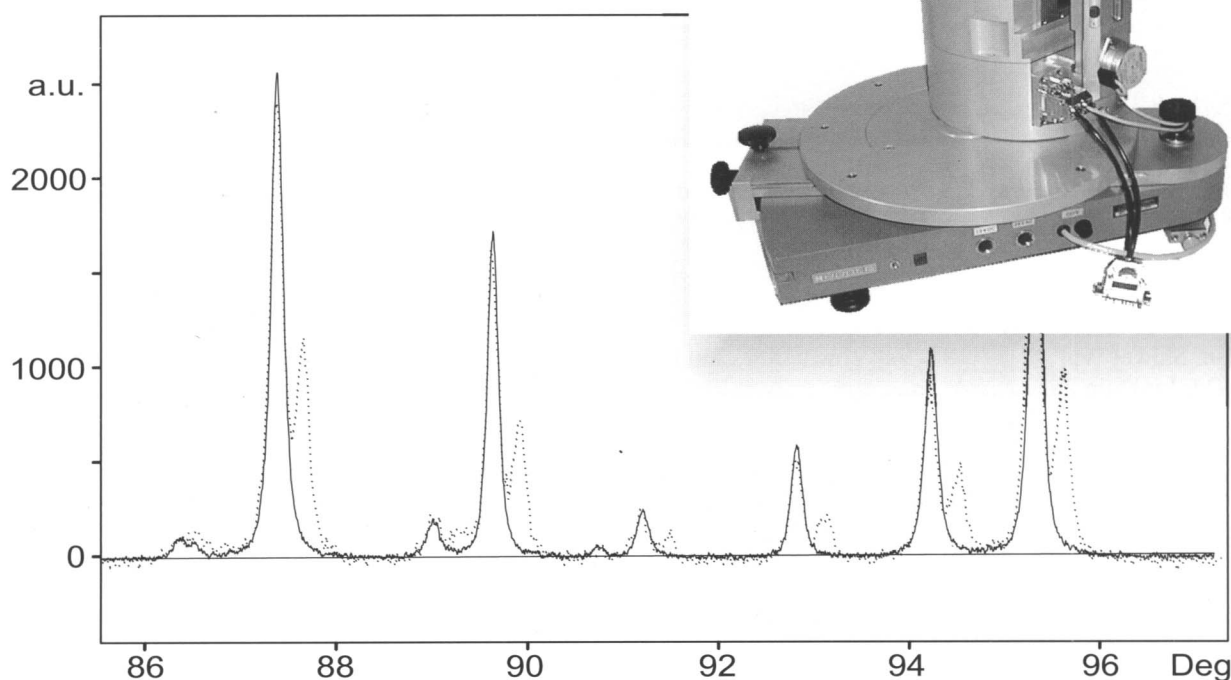
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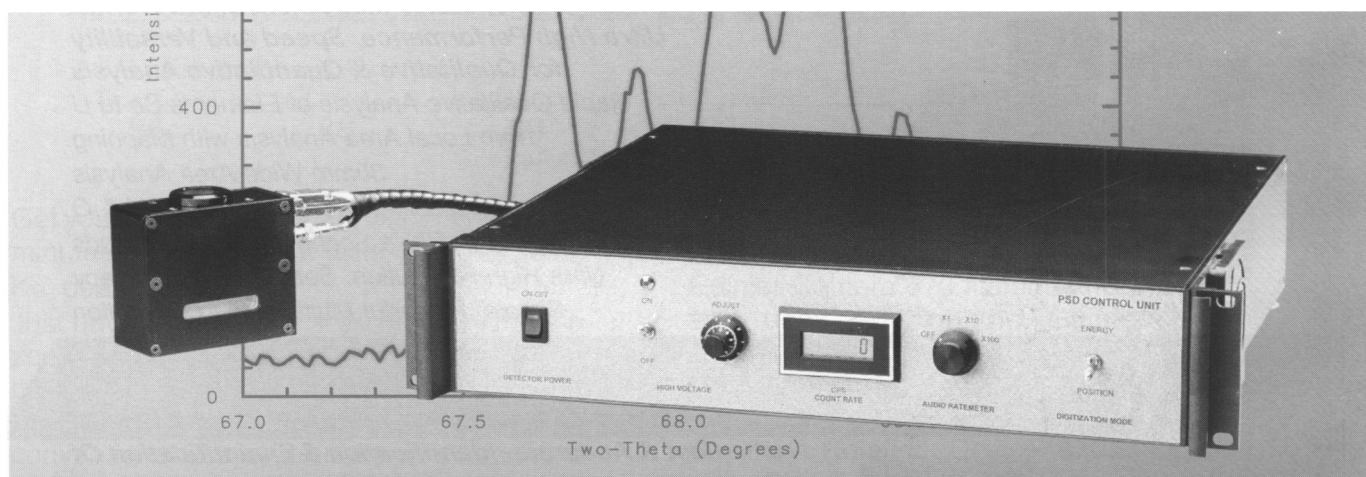
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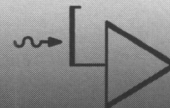


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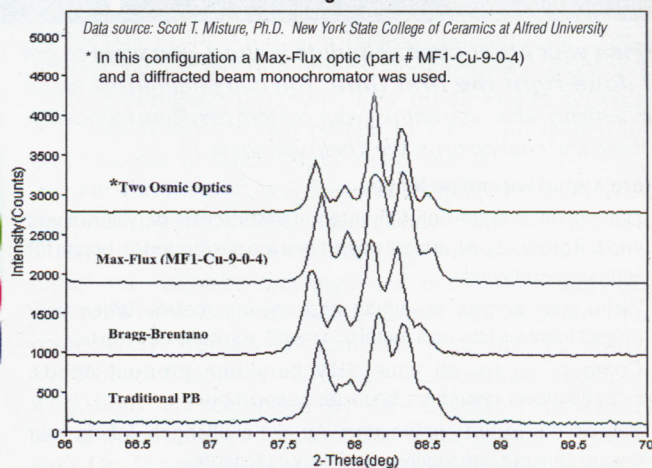
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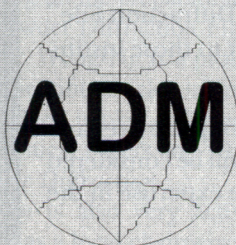


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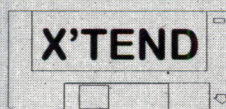
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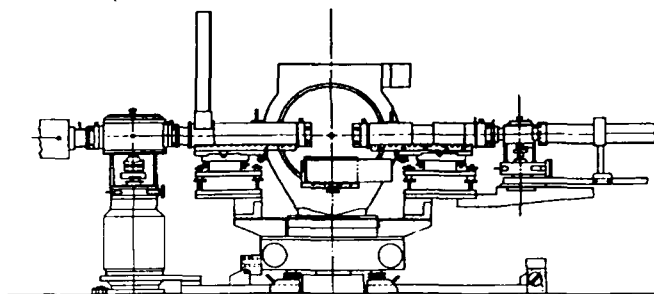
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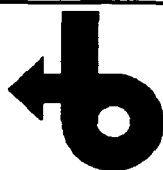
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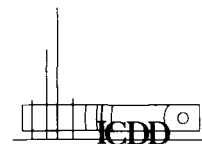
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