

TABLE AI. (Continued)

Material	Condition	Transition conditions		Technique	Remarks	References
		Stress (GPa)	Compression (%)			
Alkali halides (Continued)						
KBr	Crystal	~2.2	...	P-1	3.5 mm, $\rho_0 = 1.999 \text{ Mg/m}^3$	Al'tshuler <i>et al.</i> (1963)
KBr	Crystal	1.85 ± 0.08	...	E-8	...	Larson (1965)
KBr	Pressed	2.38	11.3	E-10	4.9 to 30.2 mm, $\rho_0 = 2.70 \text{ Mg/m}^3$	Dremine <i>et al.</i> (1965)
KBr	[001] crystal	...	...	E-10	Unloading hysteresis of 1 GPa	Al'tshuler <i>et al.</i> (1967)
KBr	Pressed powder	2.05	10.9	E-10	$\rho_0 = 2.70 \text{ Mg/m}^3$	Adadurov <i>et al.</i> (1970)
KBr	Pressed powder	...	...	E-10	$\rho_0 = 2.57, 2.45, \text{ and } 2.00 \text{ Mg/m}^3$	Adadurov <i>et al.</i> (1970)
KBr	...	2.1	11.5	-10	$\rho_0 = 2.70 \text{ Mg/m}^3$	Khristoforov <i>et al.</i> (1971)
NaCl	Crystal	2.9	...	E-8	?	Larson (1965)
						See Royce (1969)
NaCl	Pressed powder	2.3	...	E-8	?	Larson (1965)
						See Royce (1969)
NaCl	...	~3.0	...	E-5	?	Larson <i>et al.</i> (1966)
						See Royce (1969)
NaCl	Pressed powder	...	...	E-6	No transition observed, problem with explosive driver used by Larson (1965)	Royce (1969)
NaCl	[100], [111] crystal	23.1	30.6	P-2	$\rho_0 = 2.165 \text{ Mg/cm}^3$	Fritz <i>et al.</i> (1971)
NaCl	Crystal	...	...	P-17	Recovery of samples loaded between 4.0 and 3.5 GPa. $T_0 = 113, 253, 293, 328 \text{ and } 348 \text{ K}$. Evidence for recrystallization from dense phase.	Brazhnik <i>et al.</i> (1969)
CsI	Crystal	<25	...	E-14	Electrical resistance	Alder <i>et al.</i> (1956a)
CsI	Crystal	<28	...	E-14	Electrical resistance	Alder <i>et al.</i> (1956b)
CsI	Pressed pellet	<28	...	E-14	Electrical resistance	Alder <i>et al.</i> (1956b)
CsI	...	...	...	...	Calculated temperature rise to explain Alder's results	Pospelov <i>et al.</i> (1966)
RbI	Pressed pellet	<28	...	E-14	Electrical resistance	Alder <i>et al.</i> (1956b)
RbCl and CsCl	...	...	...	-17	Solid solutions of RbCl-CsCl synthesized from RbCl and CsCl starting materials	Batsanov <i>et al.</i> (1969)
III-V, II-VI Compounds						
CdS	Crystal <i>c</i> axis	3.15	3.3	E-8	ϕ, τ	Kennedy <i>et al.</i> (1966)
CdS	Crystal <i>a</i> axis	2.8	3.3	E-8	ϕ, τ	Kennedy <i>et al.</i> (1966)
CdS	CdS-water mixture	...	...	D-17	Zinc blende structure recovered	Leiserowitz <i>et al.</i> (1966)
InSb	Crystal [100]	2.0	3.0	E-8	...	Kennedy <i>et al.</i> (1965)
InSb	Crystal [111]	1.7	2.1	E-8	ϕ, τ	Kennedy <i>et al.</i> (1965)
BN	Graphitelike	12.0	28.8	E-1	$\rho_0 = 1.95 \text{ Mg/m}^3$ rarefaction shock not observed	Al'tshuler <i>et al.</i> (1967)
BN	Hexagonal powder pressed to 98.5% of theoretical density	12.2	20	P-3	3.2 to 3.8 mm, T_0 values 298 K, 393 K, 473 K, 573 K, 658 K, 713 K, $\Delta V \sim 19\%$, cubic zinc blende phase and wurtzite recovery	Coleburn <i>et al.</i> (1968)
BN	Graphitelike	12.8	29.6	...	$\rho_0 = 2.00 \text{ Mg/m}^3$, wurtzite phase recovered	Adadurov <i>et al.</i> (1967)
BN	Hexagonal	...	...	P-17	$\rho_0 = 0.8 \text{ Mg/m}^3, 1.98 \text{ Mg/m}^3, T_0 = 300 \text{ K}$ and 800 K cubic and wurtzite phases recovered after shocking to 12.0 GPa	Dulin <i>et al.</i> (1969)
BN	Powder	...	...	D	Dense phase recovered	Batsanov <i>et al.</i> (1965)
BN	Pressed powder	13.5	...	P-14	$\rho_0 = 1.97 \text{ Mg/m}^3$, electrical resistance	Kuleshova (1969)
BN	Graphitelike	...	...	G, P-17	Recovered samples showed no zinc blende structure, wurtzite structure recovered, crystallites $\sim 200 \text{ \AA}$	Soma <i>et al.</i> (1975)

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		Stress (GPa)	Compression (%)			
III-V, II-VI Compounds (Continued)						
GaAs	High purity polycrystal	20±1.1	19	E-4	$\rho_0 = 5.326 \text{ Mg/m}^3$	Goto <i>et al.</i> (1976)
GaP	High purity polycrystal	26	22	E-4	$\rho_0 = 4.127 \text{ Mg/m}^3$	Syono <i>et al.</i> (1977)
Oxides						
TiO ₂	Rutile phase crystal	33	12	P-2, 17	$\Delta V \sim 21\%$, orthorhombic lead dioxide structure recovered	McQueen <i>et al.</i> (1967)
TiO ₂	Hot pressed powder	<20	...	E, P-11, 17	6 mm, $\rho_0 = 4.18, 4.15, 4.07, 2.83 \text{ Mg/m}^3$, orthorhombic lead dioxide structure recovered, τ	Linde <i>et al.</i> (1969)
SiO ₂	α -Crystal x -cut	14.5	16.5	E, P-5	3.2 to 12.7 mm, τ	Wackerle (1962)
SiO ₂	α -Crystal y -cut	14.5	16.5	E, P-5	3.2 to 9.5 mm, τ	Wackerle (1962)
SiO ₂	α -Crystal z -cut	14.5	16.5	E, P-5	3.2 to 9.5 mm, τ	Wackerle (1962)
SiO ₂	α -Crystal x, y, z -cut	...	...	P-	Examination of samples shocked at 50 GPa shows amorphous quartz; those shocked at 25 GPa show α -quartz	Wackerle (1962)
SiO ₂	Fused	...	...	P-	Recovered samples show permanent densification at 25 GPa	Wackerle (1962)
SiO ₂	α -Crystal	...	...	P-	Recovered samples show amorphous quartz when shocked to 36 and 60 GPa	DeCarli <i>et al.</i> (1959)
SiO ₂	α -Crystal, quartz rocks	...	...	D-17	Traces stishovite recovered	DeCarli <i>et al.</i> (1965)
SiO ₂	α -Crystal	...	...	?	Very high pressure	Al'tshuler <i>et al.</i> (1965)
SiO ₂	Powder	...	...	D-17	Coesite recovered	Deribas <i>et al.</i> (1968)
SiO ₂	α -Crystal	...	...	E, P-4	Loading and unloading	Ahrens <i>et al.</i> (1968)
SiO ₂	α -Crystal	...	...	P-1	Very high pressure	Trunin <i>et al.</i> (1971a)
SiO ₂	Powder	...	...	P-	$\rho_0 = 1.15, 1.35, 1.55, \text{ and } 1.75 \text{ Mg/m}^3$	Trunin <i>et al.</i> (1971b)
SiO ₂	x - and z -cut crystals	...	...	E, P	Recovered amorphous quartz above HEL	Anan'in <i>et al.</i> (1974)
SiO ₂	α -Quartz	...	...	...	Pulsed electron beam, $\alpha \rightarrow \beta$ transition	Gauster <i>et al.</i> (1973)
SiO ₂	Quartzite, α -quartz	...	...	...	Orthorhombic quartz in recovered samples	German <i>et al.</i> (1973)
PbO ₂	...	...	...	D-17	Dense phase recovered	Leiserowitz <i>et al.</i> (1966)
PbO ₂	PbO ₂ -water mixture	...	...	D-17	Dense phase recovered	Leiserowitz <i>et al.</i> (1966)
D. Ferroelectric ceramics						
Pb(Zr _{0.52} Ti _{0.48})O ₃	Polycrystalline ceramic	...	...	E-5	Multiple wave structure observed	Reynolds <i>et al.</i> (1961)
Pb(Zr _{0.52} Ti _{0.48})O ₃ 1 wt % Nb ₂ O ₅	Polycrystalline ceramic	...	...	E-5	12.7 mm, multiple waves not associated with ferroelectric to paraelectric transition	Reynolds <i>et al.</i> (1962)
BaTiO ₃	Polycrystalline ceramic	...	...	E-5	Multiple wave structure observed	Reynolds <i>et al.</i> (1961)
BaTiO ₃	Polycrystalline ceramic	...	...	E-5	12.7 mm, multiple waves not associated with ferroelectric to paraelectric transition	Reynolds <i>et al.</i> (1962)