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Titolo	My Journey with Shock Waves // by Yasuyuki Horie
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	9789811937125 9789811937118
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (182 pages)
Collana	Shock Wave and High Pressure Phenomena, , 2197-9537
Disciplina	533.293
Soggetti	Continuum mechanics Condensed matter Thermodynamics Continuum Mechanics Condensed Matter
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Beginning -- Ph.D thesis on phase transition in iron -- Sojourn in Great Britain -- Back to the USA -- Mid-life Turning Points -- New international collaborations at NCSU -- LANL -- AFRL, Eglin AFB -- Life after retirement.
Sommario/riassunto	This book compiles historical notes and a review of the work of the author and his associates on shock compression of condensed matter (SCCM). The work includes such topics as foundational aspects of SCCM, thermodynamics, thermodynamics of defects, and plasticity as they relate to shock compression, shock-induced phase transition, and shock compaction. Also included are synthesis of refractory and hard ceramic compounds such as Ni aluminides, SiC and diamonds, method of characteristics, discrete element methods, the shock compression process at the grain scale, and modeling shock-to-detonation transition in high explosives. The book tells the story of how the author's view of shock physics came to be where it is now. and analytically discusses how the author's appreciation of shock waves has evolved in time. It offers a personal but pedagogical perspective on SCCM for young scientists and engineers who are starting their careers in the field. For experts it offers materials to nudge them reflect on

their own stories, with the hope of planting a seed of motivation to write them down to be published.

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