

The scope of CPIA's operations includes all science and technology information associated with hardware systems, components, and technologies for missile, space, and gun propulsion.

- Airbreathing Systems
- Electrical Systems
- Health Management, Monitoring, & Control
- Hybrid Systems
- Insensitive Munitions
- Lifecycle Costs
- Liquid Engine Systems
- Manufacturing, Fabrication, Processing, & Characterization
- Nondestructive Evaluation
- Nuclear Systems
- Occupational & Explosive Hazards
- Propulsion Components
- Reliability
- Safety
- Service Life
- Solid Propellant Systems
- Test Procedures

Chemical propulsion contributes greatly to our understanding of the Universe, our quality of life, and our national security. Rockets have propelled man to the moon and back; launched interplanetary probes to the Sun, Mars, Venus, Saturn, and Jupiter; and placed the Hubble Telescope in space to study the origins of our universe. Some satellites, placed in orbit by the largest launch vehicles in the free world, provide reconnaissance and intelligence information vital to our national security. Our missiles have defeated foreign aggressors and continue to safeguard the United States.

CPIA's mission is to serve as the U.S. national clearinghouse for worldwide information, data, and analysis on chemical, electrical, and nuclear propulsion for missile, space, and gun propulsion systems. CPIA provides technical and administrative support to the Joint Army-Navy-NASA-Air Force (JANNAF) Interagency Propulsion Committee and its nine subcommittees.

CPIA offers a wide variety of information products and services including comprehensive, searchable CD-ROM databases of technical papers; technology assessments; propulsion manuals; propulsion computer codes; meeting coordination and proceedings; and responses to user technical and bibliographic inquiries.

TATs & Products

DoD Explosives Safety Standards for Energetic Liquids

CPIA located, identified, reviewed and summarized energetic liquids accidents data and safety guidelines (commercial industry, other government, and international) and prepared proposed changes for the DoD 6055.9-STD, Chapter 9, Paragraph F "Liquid Propellants," which is promulgated by the DDESB.

Department of Defense Explosives Safety Board (DDESB) Database

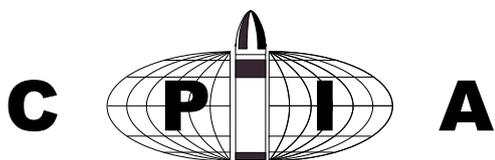
CPIA developed a CD-ROM product containing 26,000 pages of searchable text and images, and a home page database with more than 1,700 searchable bibliographic and abstract citations of papers from the technical seminars of the DDESB from 1952 to the present.

Literature Review and Assessment of High Explosives Technologies for the 120 mm Composition B Replacement Program

This task involved a focused technology review and assessment of the maturity, advantages and disadvantages of applicable explosives technologies and recommendations on promising alternatives for Army mortar programs.

Characterization & Component Identification of Selected Ammunition Items

CPIA is compiling research information and data to provide accurate



Chemical Propulsion Information Agency

and complete chemical characterization data for selected military munitions and components. This information is being entered into a relational database to be made available to other agencies and activities through the Munition Items Disposition Action System (MIDAS) program of the Defense Ammunition Center.

Propulsion Information Retrieval System (PIRS)

This CPIA developed CD-ROM is a combined database and search and retrieval system consisting of approximately 70,000 document citations covering 40 years (1960–2000) that relate to missile, space, and gun propulsion research and technology.

CPIA Propulsion Manuals

Technical information summaries are provided for solid and liquid rocket motors, propellants and static test facilities; solid propellant ingredients, and air-breathing propulsion. These manuals are continually updated to provide the most comprehensive technical reference information available.

The CPIA Technology Reviews & Briefings

These provide state-of-the-art summaries and objective assessments of emerging technology trends and developments. CPTR 99–69, Burning Rates of Standard Solid Propellants for Gun Applications identifies currently available gun propellant burning rates and examines the functional dependencies in these burning rate data.

CPTR 97–65, Electric Thruster systems, presents the operating principles and current areas of development and application of specific electric thruster systems. CPTR 97–66, Expandable Launch Vehicle (ELV) Propulsion Systems, is an overview of international ELV propulsion technology and the growing international satellite launch service market. CPTR 98–68, Reusable Launch Vehicle (RLV) Propulsion Systems, is a similar overview of Russian and U.S. developments and plans for RLVs.

JANNAF Propulsion Meetings

These CD-ROM disks contain over 7,900 pages of text from 87 volumes of meeting proceedings from 1972 through 1999 covering all aspects of missile, space and gun propulsion research and technology.

Standard Propulsion Computer Codes

CPIA maintains and distributes several government-sponsored standard propulsion computer codes for delivered performance prediction; grain regression prediction; internal motor flowfields characterization; exhaust plume characterization and spectral signatures.

CPIA Bulletin

This free bulletin is the newsletter of the propulsion industry with a bi-monthly distribution of about 5,000.

For a listing of products, prices, availability, and distribution limitations, contact CPIA or visit our Web site at

<http://www.jhu.edu/~cpia>

In the near future, CPIA's URL will change to
<http://iac.dtic.mil/cpia>

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