

R&D 100 Awards

1350 East Touhy Avenue
P.O. Box 5080
Des Plaines, IL 60017-5080
(708) 390-2739
FAX: (708) 390-2618

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July 11, 1990

Mr. Herbert C. Younger
Jet Propulsion Lab
4800 Oak Grove Dr
Pasadena CA 91109

Dear Mr. Younger:

Congratulations! The judges of the 1990 R&D 100 Awards competition for significant new technology have selected

Time Warp Operating System

from the entries submitted by your organization to receive the coveted R&D 100 Award(s).

So that you will know: In a separate letter, your president or chief operating officer is being invited to attend the Awards Banquet on September 26 at the Museum of Science & Industry in Chicago to accept on behalf of your organization. That ticket is free. The recipient should be dressed in black tie.

All winning products will be featured in a special exhibit at the Museum and details about your participation are enclosed.

Things to do now:

1. Be sure your president or COO looks at the letter from me and reserves September 26 to attend the Awards Banquet.
2. Notify any organization that is a joint entrant with yours and should know about this letter.
3. Make certain that all of the right people in your Public Relations department are informed of the details of this letter, including the announcement release date of September 26.
4. Consider who, besides the award recipient, should represent your organization at the awards program (product developer(s), VP R&D, PR director, etc.).

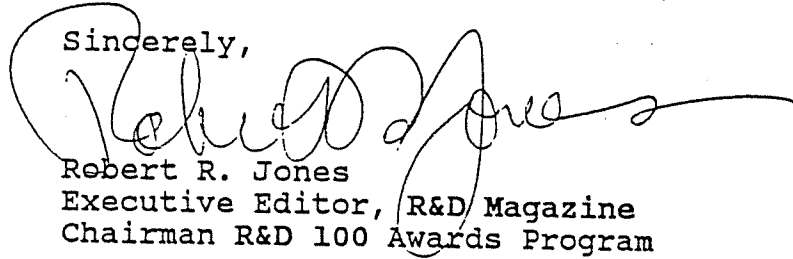
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5. Schedule a formal photo of those people in an award-presentation pose, to be taken before the reception on September 26.

6. Look at the exclusive R&D 100 souvenirs that are offered and imagine how they can enhance your internal public relations efforts.

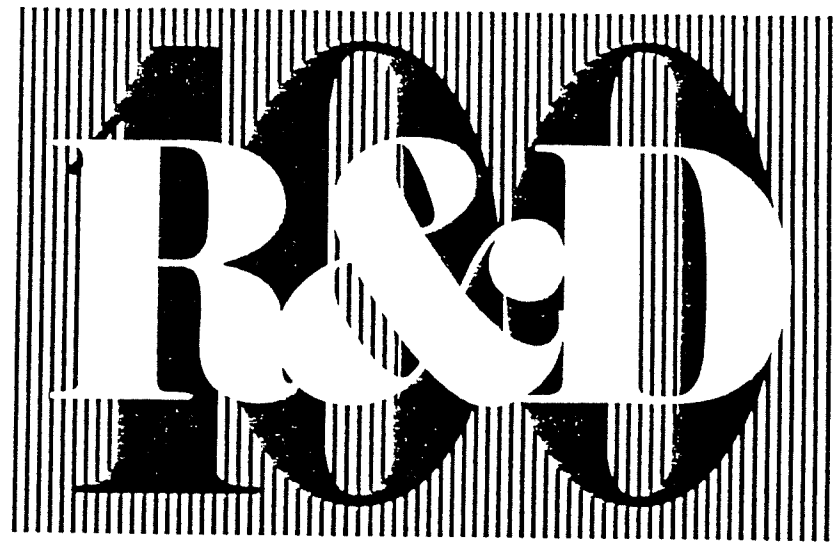
If you have any questions, please feel free to call me or our R&D 100 Coordinator, Ms. Tina Lentz, at 708/390-2739.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert R. Jones". The signature is written in black ink and is positioned above the typed name and title.

Robert R. Jones
Executive Editor, R&D Magazine
Chairman R&D 100 Awards Program

RRJ:md



1990 Competition Winners

Congratulations —

With your 1990 R&D 100 Award, you and your organization become part of an elite group of people and organizations who have won this award for significant new technology over the past 28 years.

This prestigious honor is much sought-after. Many apply, but few succeed. As one of the latter, you will want to participate in all of the activities and reap all of the honors that accrue to R&D 100 Award winners. And you will want to share the news and satisfaction of your accomplishment with people who are both inside and outside of your organization.

This folder is designed to help you do that. It tells about the Awards Reception and Banquet, the R&D 100 Award winners exhibit at Chicago's Museum of Science & Industry, formal award presentation photographs, exclusive R&D 100 Awards souvenirs, and ways that you can publicize your award both internally and externally.

If you have any questions about these subjects, please call us.

Robert R. Jones, Chairman
Gary Parr, Assistant Chairman
Tina A. Lentz, Coordinator

1990 R&D 100 Award Winners

Company or Organization	Winning Product
Advanced Temperature Devices Inc.	Advanced Temperature Devices (RTDs) Flex-Sor and FyreLine
Air Products & Chemicals Inc.	Primax UH-1000 Series Surface-Modified Particles
Alupower Inc.	Alwatt Battery Model SDL-1A
Ames Laboratory (DOE) and Iowa State Univ.	Thermite Reduction Process for Making Rare-Earth-Iron Alloys
Argonne Natl. Lab (DOE)	Blood Cadmium Assay Kit 100
Atlantic Richfield Co. and Flowtronex International	Flowtronex Vapor Pressure Analyzer 300
Atlantic Richfield Co. and Exlog Inc.	Advanced Drillstring Analysis and Measurement System
Atochem North America	Methanesulfonamide Process
Atomic Energy of Canada	Impela 10/50 Radiation Processor
Becton Dickinson & Co.	QBC Malaria Test
Bell Communications Research Inc.	Epitaxial Liftoff
Brookhaven Natl. Lab (DOE)	Wavefront Dividing Infrared Interferometer NSLS-U4IR
Cahn Instruments Inc.	TG151 High Pressure, High Temperature Thermogravimetric Analyzer
Ceramatec Inc.	Thermal Shock Resistant Ceramic LE-1500
Ciba-Geigy Corp.	Tinuvin 123
Coherent Inc.	PowerTrack in the Innova 300 Ion Laser System
Communication Intelligence Corp.	Handwriter Data Entry System
Diemolding Corp.	Biosurge Synchronous Autotransfuser
Dynatech Corp.	Dynapro Infrared Gas Analyzers 100 and 101
Eastman Kodak Co.	KAF-4200 4.2 Magapixel Solid State Imager
E.I. duPont de Nemours & Co.	Teflon Fluoroadditive MP 1500
Engelhard Corp. and Oak Ridge Natl. Lab (DOE)	Harshaw No. 8800 Thermoluminescent Dosimetry System
Exos Inc.	GripMaster Measurement Device
FEI Co.	Series 500 Focused Ion Beam Milling System
Gaymar Industries Inc. and Falcon Rehabilitation Products Inc.	HiRider Powered Wheelchair
General Electric Co.	Halogen-IR PAR-38 Lamps
Gerber Scientific Inc.	Particulate Volume Monitor PVM-100
Haynes International	Haynes Alloy 242/242 Products
Hi-Tek Polymers Inc.	AroCy L-10 Cyanate-Functional Resin
Holometrix Inc.	Permalizer 2000
Holometrix Inc.	Thermaflash 2200

1990 R&D 100 Award Winners

Company or Organization	Winning Product
Hughes Aircraft Co.	Sound Retrieval System
Hughes Aircraft Co.	Super NiCd Battery
Hydro-Quebec and Joslyn-Canada Inc.	ZQTS Distribution Surge Arrester
Idaho Natl. Engineering Lab (DOE) and Finnigan-MAT Corp.	Gas Mass Spectrometer 271/251
Idaho Natl. Engineering Lab (DOE)	FiberOptic Moire Interferometry System
Idaho Natl. Engineering Lab (DOE)	Sulfur-Poisoning-Resistant and Rechargeable Hydrogenation Catalysts
ILC Technology Inc. and National Institute of Standards & Technology	X-UV Silicon Photodiode XUV100C
Infinity Photo-Optical	Continuously-Focusable Microscope
Jet Propulsion Lab	Ballistic Electron Emission Microscope
Jet Propulsion Lab	Time Warp Operating System
Keithley Instruments Inc.	Source-Measure Units 236 and 237
Lawrence Berkeley Natl. Lab (DOE)	Soft X-ray Small Angle Scattering Apparatus SXSA-447
Lawrence Livermore Natl. Lab (DOE)	High-Speed Time Resolved Diffractometer Reaction Chamber
Lawrence Livermore Natl. Lab (DOE)	Ultra-Low Density Silica Aerogel
Lawrence Livermore Natl. Lab (DOE)	Micro-Thin Lens
Link Analytical	Energy Dispersive X-ray Spectrometer
Los Alamos Natl. Lab (DOE)	Solid State NO ₂ Sensor
Los Alamos Natl. Lab (DOE)	Broadband Microwave Absorption Spectrometer for Liquid Media
Los Alamos Natl. Lab (DOE) and U.S. Secret Service	Universal Process for Fingerprint Detection
Los Alamos Natl. Lab (DOE) and Univ. of Tennessee	Fast Agarose Gel Electrophoresis
Los Alamos Natl. Lab (DOE)	Molybdenum Disilicide/Silicon Carbide Compsites
Los Alamos Natl. Lab (DOE)	Upconversion Solid State Laser
Los Alamos Natl. Lab (DOE) and National Institute of Standards & Technology	Coolahoop Cryogenic Refrigerator
Materials & Electrochemical Research Corp.	Silicon Carbide Fiber Tow
Mechanical Measurement Devices	Dynamic Moduli Measurement System 3012A
Membrane Technology & Research Inc.	VaporSep Systems for CFC and HCFC Recovery
MetriCor Inc.	Fiber Optic Current Sensor System and Probes
Mitsubishi Electric Corp.	Microwave Power Amplifiers MGFC42V3742

1990 R&D 100 Award Winners

Company or Organization	Winning Product
Mitsubishi Electric Corp.	Digital Image Signal Processor M65720S
Molecular Dynamics Inc.	Autophoresis 1000A
NASA Langley Research Center and Foster-Miller Inc.	Foster-Miller In Situ Fiber Optic Polymer Reaction Monitor PRM-100
NASA Langley Research Center and Macrodyne Inc.	FDP 3100 Frequency Domain Processor
NASA Lewis Research Center and Sverdrup Technologies	High Temperature, Flexible, Ceramic Wafer Seal CW-5000
National Institute of Standards & Technology	Laser Telemetry Dosimetry System
National Institute of Standards & Technology	Scanning Scattering Microscope
National Institute of Standards & Technology	Stochastic Analyzer for Pulsating Phenomena
National Institute of Standards & Technology	Fast Information Retrieval System
National Institute of Standards & Technology	System for Growing Single Crystals by Osmotic Dewatering
Naval Civil Engineering Lab	Compact Ocean Lift System
NCube Corp.	NCube 2 Modular Supercomputer
Oak Ridge Natl Lab (DOE) and VG Microscopes Ltd.	VG Microscopes HB501 UX STEM
Oak Ridge Natl. Lab (DOE)	Iodophenylmaleimide Radioimmunoconjugator
Oak Ridge Natl. Lab (DOE)	Ductile Iron Aluminides
Oak Ridge Natl. Lab (DOE)	ORNL HT-UPS "Lean" Austenitic Stainless Steel
Optical Coating Laboratory Inc.	Metal Mode Reactive Sputtering Process — MetaMode
Organogenesis Inc.	Testskin System 500
Pacific Northwest Lab (DOE) and Washington State Univ.	Q-Endoscreen
Pacific Northwest Lab (DOE)	Pyroflux Glass Melting Process
Pennzoil Corp.	Pennzane Synthesized Hydrocarbon Fluid X2000
Photonics Systems Inc.	Flat Panel Video Display PSM-17-RGB
Physical Research Inc.	Magnevision MV100 and MV200
Sandia Natl. Lab (DOE) and Lawrence Berkeley Natl. Lab (DOE)	High-Fluence Laboratory XUV Source
Sandia Natl. Lab (DOE)	Phase Gradient Autofocus for Synthetic Aperture Radar
Shandon Scientific Ltd.	Cadenza Automated Immunostainer
Sierra Scientific	Visioneer 4050 Video Camera
Solar Energy Research Institute (DOE)	Inexpensive Phenol Replacements from Biomass
Sundstrand Aviation	In Situ Composite Fabrication, PEEK Foam
Systron Donner Corp.	Linear Fire Extinguisher

1990 R&D 100 Award Winners

Company or Organization	Winning Product
Tektronix Inc.	The CAChE Worksystem
Thermionics Laboratory	HM ² Series e-Gun Evaporation Systems
Toshiba Corp.	Gate Turn Off Thyristor SG3000GXH24
U.S. Bureau of Mines	BIO-FIX Beads
United Technologies Corp.	Process for Ceraform Silicon Carbide Mirrors
Univ. of Utah and Animate Systems Inc., Div. of Sarcos Group	Sarcos Humanoid Robot
Varian Associates	Varian Monolithic 5-100 GHz Amplifier
Varian Associates	Optical Fiber Power Receiver
Varian Associates and Baxter Healthcare	MegaRay Compact E-b Sterilizer
Vitesse Semiconductor Corp.	High Speed, Low Power GaAs Gate Array
Welch Allyn Inc.	VideoProbe 2000 VS208 Shadow Measurement System