

It's a Blast

Lab Takes Materials Expertise to State Fair

Demonstrating the High Pressure Gas Atomization (HPGA) process for producing fine metal powders, Ames Lab volunteers invited visitors attending the 1995 Iowa State Fair to learn more about the materials that shape our world.

By pressing a button on the HPGA model, fairgoers were able to simulate how the actual device blasts molten metals with a jet of gas traveling at three times the speed of sound, turning them into extremely fine, high-quality metal powders.

Highlighting the Lab's materials expertise, the exhibit, "It's a Materials World," focused on the marvels of powder metallurgy. Visitors to the Lab's booth were able to learn more about the HPGA technology and see examples of components made from powder materials. Typically, parts made through powder metallurgy techniques exhibit greater strength, heat resistance and wearability than do parts made from casting molten metals.

The ability to mold powder materials into components with complex shapes means little or no machining is required, an aspect

of the powder metallurgy process that amazed many fairgoers and brought them more in touch with how materials can change their lives. ■

Lab Retirees Visit the Fair



Jeanette and Carl Westberg



Gene and Carol Catus

Dedicated Volunteers



Jerry Hand, Rollie Struss and Chicago Operations Office Manager Cherri Langenfeld



Saren Johnston explains the Ames Lab's High Pressure Gas Atomization process.



Matt Besser discusses Ames Lab technologies with fairgoers.

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INSIDER

Newsletter for the Employees of Ames Laboratory ■ Volume 6, Number 8 ■ September 1995

Ames Lab's New Director Tom Barton

Less than a year after resigning to return to full-time teaching and research, Tom Barton is once again the director of the Ames Laboratory. Barton's appointment was effective on September 1.

ISU President Martin Jischke says he's pleased with Barton's selection. "Ames Laboratory is an important part of Iowa State and our national research infrastructure. A researcher and administrator of Dr. Barton's stature most certainly enhances our ability to build on the Ames Lab's strengths."

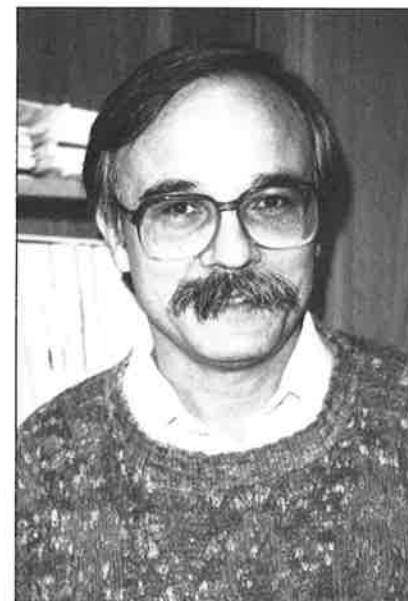
Barton is a distinguished professor in chemistry and has been a member of ISU's faculty for 28 years. He has won numerous national, regional and local awards in both teaching and research.

During the past few months, Barton has had a chance to do several things he hadn't had much time to do, like ice sailing, conducting research, writing papers, reading chemical journals and flying his airplane. He even started a new hobby of building doll-house furniture.

"I feel quite rejuvenated after some time away," says Barton. "I'm a bit surprised that I'm happy to be back. The Ames Lab is tremendously important to me, and it always will be. In next month's *Insider*, I will talk about my goals and vision for the Lab and give you information on various situations that have an effect on the Ames Lab."



AMES LABORATORY



Interim Deputy Director Bruce Harmon

Bruce Harmon, left, has been named deputy director of Ames Lab. He has served as program director for the Condensed Matter Physics program since 1982, a position he will continue to hold as deputy director. Harmon has had 22 years of experience as an administrator, scientist and teacher. He is a distinguished professor of physics and a Fellow of the American Physical Society. "It is difficult to imagine an interim deputy director who is more talented or held in higher regard than Bruce Harmon," says Director Tom Barton. "Bruce's knowledge and experience will be critical as we plan for the future of the Laboratory." One of Harmon's responsibilities will be the development of new programmatic functions for the Lab. "These are interesting times for the DOE, and I'm looking forward to working with Tom Barton and the rest of the Ames Lab staff to promote the excellent research atmosphere of the Lab," says Harmon.

INSIDER

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Made to Order

Unique Cabinets Cut Chemical Odors

Burning rubber, rotten eggs, dead fish — they're all offensive smells that set our olfactory nerves on overload. But they're lightweight odors compared

to the stench that greets members of chemist Marc Porter's research group when they open the door to a nondescript refrigerator in the basement of Spedding Hall.

The refrigerator is home to an odiferous assortment of volatile, sulfur-based chemical compounds called thiols, which must be refrigerated to retain their stability. Porter's research group uses thiols to prepare monolayers, special films that are only one molecule thick and that help scientists investigate in detail the complex chemical reactions occurring at surfaces.

A Little Dab Will Do Ya

"It doesn't take much of these chemicals to enter the air and be very offensive," says Shelley Coldiron, associate scientist and a member of ISU's Microanalytical Instrumentation Center. "They can be quite raunchy," she adds with a grimace.

Coldiron, who is overseeing renovation of Porter's new lab facilities in Gilman Hall, says there's usually little health risk associated with the thiols, but the harsh odor often causes concern to those who are unfamiliar with the chemicals. "Just one drop of these chemicals on a table can overwhelm you, fill the lab and spill into the hallway," she says.

Coldiron explains that those individuals doing monolayer research have tried to lessen the degree of stench they're exposed to by putting the tightly capped bottles of thiols in plastic bags and containers. But even the sealed containers can't prevent the slow process of evaporation, and when an unlucky researcher opens the refrigerator door, the unbearable smell escapes, saturating the senses and cling-

ing to clothing.

Hoping that the members of the monolayer research team would not have to bring their stinky little problem with them when they move to the new lab in Gilman Hall, Porter's group turned to Ames Lab's Facilities Services personnel, hoping they could provide a storage solution.

Capturing Those Culprit Fumes

"The problem is that the chemicals are stored in a captive air space," says Mark Grootveld, acting manager for Facilities Services. "When you open the refrigerator door, the odors hit you. To overcome that problem, we needed a system to capture and exhaust the fumes."

Facilities personnel first discussed the idea of installing a walk-in hood for the refrigerated chemicals. "A lot of air would have to be pulled through a walk-in hood," says Mark Nelson, project engineer. "It would require a new exhaust duct from the lab to the roof and a new blower." Nelson adds that ISU engineers and architects were very concerned about increasing the requirement for make-up air in the Gilman Hall lab, which already has five hoods.

The entire package was cost-prohibitive. There was also concern about the effectiveness of a walk-in hood. Turbulence created by opening the refrigerator door might cause fumes to be swept out of the hood into the room, and researchers would still have to put up with the pungent odors.

Getting Rid of the Reek

"As we talked about the walk-in hood and the problems associated with it, we said, 'It's too bad



Ralph Appelgate, Mark Nelson and Mark Grootveld helped design and build Marc Porter's new "odor-eaters," special cold-storage cabinets that reduce chemical smells.

we can't tap into the refrigerator and draw a small amount of air through it on a continuous basis, much like a vented solvent storage cabinet," says Grootveld.

With new air constantly coming into the refrigerator and old air being exhausted out, the fumes wouldn't build up and engulf anyone opening the door. But maintaining a continuous air flow would mean losing refrigeration, not a satisfactory situation for storing thiols.

"That's when we hit upon the idea of installing a separate air-conditioning unit to cool the incoming air," says Grootveld. With the makings of a plan, the Facilities team went to work. They needed insulated cabinets to maintain the refrigerated atmosphere created by the incoming cold air. Those cabinets would be costly to construct, so Ray Gress, manager for environmental services, located two used side-by-side refrigerators that were purchased for the nominal fee of \$50.

Refrigeration and cooling equipment for the storage of flammable liquids must meet

stringent National Fire Protection Association (NFPA) requirements. Facilities engineers met with ISU engineers and safety personnel and members of Porter's research group to ensure that the installation would satisfy all NFPA safety standards and operational requirements.

Facilities personnel removed all of the mechanical and electrical parts from the refrigerators to eliminate any ignition that might be caused by sparking. After gutting the refrigerators, only the insulated boxes remained, exactly what was needed to construct the novel cabinets.

Porter's new cold-storage cabinets have inlets on one side of each of the insulated boxes that allow cold air to enter from the special refrigeration equipment purchased for the system. After circulating, the air is exhausted through the cabinet.

"Facilities came up with a good conceptual design," says Coldiron. "Air is being replaced on a constant basis in the refrigerator boxes, so you're not bombarded with a bombshell smell when you open the door."

"To our knowledge, there is no similar commercial cold storage system available for the price we were able to design and build this unit," adds Nelson. "We had to do some creative thinking. But I've seen what the shops people can do, and having the support of that kind of talent and know-how is what allowed us to come up with our own solution." ■

PLEASE NOTE:

Refrigeration and cooling equipment for the storage of flammable liquids must meet the stringent requirements of National Fire Protection Association Standard 45. The use of modified domestic refrigerators for the storage of flammable liquids (removing internal switches, lights, etc., but retaining the original mechanical equipment) is prohibited in Ames Lab space by the Ames Laboratory Environment, Safety and Health Program Manual as per the guidance received from DOE.

Inside Scoop

Wherever the Road May Lead

If retirement conjures images of a serene life, fewer activities and a slow-paced schedule, then that's an inaccurate description of Marlene Frisk's future plans.

Marlene, clerk and computer operator, retired September 15 after 31 years of service to Ames Lab. However, her calendar will remain brimming with activities, one of which includes exploring the United States in a 31-foot motor home. "I plan on being busier than ever and living life on the edge," says Marlene. "My husband and I have a lot of interesting and exciting plans."

Marlene and her husband sold their house and furniture to fund a motor home journey across the country. The motor home, complete with numerous amenities, will be their living quarters indefinitely and will provide many creature comforts. "We're not sure where we're going, but it will probably be somewhere south. Wherever the wind blows us, I guess," says Marlene.

"We plan on living in the motor home for at least five years," she says. "We know people who have done this for 10 years and really enjoy the freedom. If we want to stay in Texas for awhile, we can. If we get tired of Texas, we can drive to Arizona."

Marlene says she and her husband have been planning this for a long time and are excited about finally hitting the road. "What more could a person ask for," says Marlene. "We can travel anywhere, and we don't ever have to check into a hotel."

Marlene says her husband retired four years ago and is anxious for her to enter the phase of life where alarm clocks are nonexistent.

"Sometimes, I'll tell him to hurry up, and he says, 'I don't have to hurry, I'm retired.' It will be nice when I can finally say that back to him," quips Marlene.

Besides enjoying the open



Marlene Frisk

road, Marlene plans to stay busy with many activities. When she isn't reading mystery novels or writing newsletters, she takes classes "just to learn new things" and even managed to sneak in a snorkeling lesson while visiting Florida. Marlene is an experienced photographer and plans to continue snapping pictures of the exciting places she and her husband visit.

"I love challenges and figuring out things," says Marlene. "That's why I liked working at Ames Lab. People asked me computer questions and I enjoyed helping them find answers."

Marlene says she will miss her co-workers, who have become like a surrogate family to her. "The Lab truly has the best people working here, and I have really enjoyed becoming close friends with many of my co-workers."

Marlene plans to keep in touch after retiring even though she will be on the road. "My husband and I don't like itineraries," she says. "But I know I will always make time to keep in contact with my friends at Ames Lab." ■

The Hjortshoj Dimension

Welcome to the Hjortshoj Zone—a dimension where days appear to last longer and an active schedule with many projects appears to be maintained with minimal effort.

John Hjortshoj, electronics technician in the Engineering Services Group, participates in so many outside projects that one has to wonder if he has access to another dimension. A dimension that lengthens the day and allows him to juggle such an activity-filled life.

"I'm involved in many things. There's no secret to it, really. I just try to manage my time well," John says with a smile.

Besides teaching hunting safety courses for the Department of Natural Resources, for which he received the Governor's Volunteer Community Service Award, and starting a new Cub Scout troop in Slater, John has helped build a new church in his community.

"This really has been a very time-consuming but enjoyable and rewarding project," he says. John has volunteered almost every night and weekend since December to install the church's electrical and sound systems.

John described the work as "kind of trying," but says the long hours seemed worth it when the church had its August 8 grand opening. "When you finally see that those long hours really paid off, that's when you're glad you stuck with it," he says.

Excellent time management and leadership skills are common threads that run through John's activities. One of his biggest challenges was serving as chair for Slater's community library planning committee. "There were opposing ideas within the community, and I could see we were never going to get a library unless we found common ground," he says.

As committee chair, John



John Hjortshoj

helped foster a team-oriented environment, and the community worked through their differences and built a nice library. "People can do anything if they cooperate," he says.

John also participates in many activities with his family. He goes pheasant and deer hunting with his two sons. "We really enjoy it," he says. "We went on a fishing trip to Canada and had a great time."

John remains busy at work teaching electrical safety courses and serving on the Electrical Safety Committee. He even helped ISU students with the solar car. "I'm just as busy at work as I am outside of work, and I really enjoy it," says John.

His next project is building a home for his family. "My wife and I designed it, and we will begin building next spring," John says.

When asked if he knows something about time management that escapes the rest of us, John smiles and says, "You just have to love what you're doing and stick with it." ■

NATIONAL ADULT IMMUNIZATION AWARENESS WEEK

October 22 to 28 is National Adult Immunization Awareness Week. Each year in the United States, as many as 50,000 to 70,000 adults die needlessly from vaccine-preventable diseases or their complications. Influenza, pneumonia and hepatitis B lead the list. Join the fight against infectious diseases. See your doctor and get your shots today. If you have any questions, contact Occupational Medicine at 4-2056.

COLOR PRINTER AVAILABLE IN GRAPHICS

Graphics has purchased an Apple Color Laserwriter to upgrade their color printing capabilities. Color copies now have much higher quality and are less expensive than from the old QMS color printer. The cost is \$1.00 per copy.



Macintosh users can access the printer through the Ames Lab Graphics zone. For other users, a queue (TA132_LWCL) has been set up to access the printer from the cluster servers.

THANK YOU TO STATE FAIR VOLUNTEERS



A big THANK YOU to everyone who volunteered their time and expertise to demonstrate the Lab's High Pressure Gas Atomization process at the Iowa State Fair. Your dedication to the Lab's effort to inform Iowans and other visitors about Ames Lab is invaluable. Thank you for your contributions to that effort.

"THE BODY SHOP" EXERCISE CLASS

Who: All Ames Lab employees
 What: Exercise classes led by various videos
 Where: 205 TASF
 Time: Noon, Monday and Wednesday 5 p.m., Monday and Thursday
 No charge for the classes

For more details, call Vickie Hahn in Occupational Medicine, 4-6837.



ER NEWS

ER News is now strictly an electronic publication, available online on the World Wide Web. Go to the DOE Homepage (<http://www.er.doe.gov>) and click on the ER News button under Information Services.



Kathleen Trahanovsky, associate, won the 1995 Wilkinson Teaching Award. Acknowledging excellence in classroom teaching, the award is given in memory of Professor John A. Wilkinson, a longtime member of the ISU Chemistry Department.



Dan Williams, associate, received the Federal Laboratory Consortium (FLC) Regional Coordinator's Excellence Award. The Award recognizes his significant contributions to the FLC program during the past year. Williams will be the Mid-Continent Region's nominee for the National FLC Representative of the Year Award.



Darlene Gluck, manager of IPRT Facilities Engineering and Safety, has been elected president of the Professional and Scientific (P&S) Council. Gluck says, "The goal of this year's Council will be to tackle issues of special concern to P&S staff members, such as opportunities and funding for professional development and advancement, regular performance reviews, recruitment and retention of students."



Cynthia Kelchner, graduate assistant, received the 1995 Nellie Yeoh Whetten Award from the American Vacuum Society (AVS). The Whetten Award recognizes an outstanding female graduate student who is doing quality research and has the potential for leadership. Kelchner will receive a \$1,000 cash prize, a certificate and travel expenses to attend the AVS National Symposium in Minneapolis in October.

Lab Showcases
Computational Science

The information exchange was fast and furious when Ames Laboratory hosted a group of talented graduate students from across the nation at the Computational Science Graduate Fellowship Conference August 10-12 in Baltimore.



Barbara Helland, Ames Lab's technical manager for the CSGF Program, left, meets key players, **John Cavallini**, Office of Energy Research, **Margaret Wright**, president of the Society for Industrial and Applied Mathematics and **Fred Howes**, Office of Energy Research.

The students are fellows in the Computational Science Graduate Fellowship (CSGF) Program, which Ames Laboratory administers for DOE's Office of Energy Research. They came to the conference to share their experiences in using computational science methods in their research and to interact with computational science professionals.

"The CSGF Program encourages the pursuit of careers in computational science and increases awareness of the need for academic institutions to

develop interdisciplinary course offerings in this area," says Barbara Helland, technical manager for the CSGF Program and Ames Lab's assistant program director for Applied Mathematical Sciences.

Three-month practicums at DOE labs are a highlight of the CSGF Program. The practicums provide students a balance between academic and practical research in their areas of interest. ■

Hooked

When Pat Emley says, "I guess crocheting is my thing," she isn't kidding.

In the past three years, Emley has won nine blue ribbons in the Fastest Fingers contest at the Iowa State Fair crocheting competition. This year she won three blue ribbons and one red ribbon in four



Pat Emley

different contests. Her quick skill with a crochet hook has been featured on Channel 13 news and in a *Des Moines Register* article.

"It's really exciting," she says. "I never thought crocheting could get so much publicity. A service station attendant even commented about the picture in the *Register*. It's been a neat experience."

Emley earned the "fastest fingers" blue ribbons by crocheting the best patterns faster than her competition. "They gave us 20 minutes for each contest to crochet as fast as we could," she explains.

Although Emley has never won all four of the blue ribbons, she vows to attain that goal someday. "It sure would be nice," she says. "But really, I don't do it to win. I like meeting the other participants. It's been wonderful being involved. My husband has been a great supporter, and I look forward to next year." ■

World Wide Web of Knowledge

Homepage Links Ames Lab to the World

Just as crews construct highways to connect cities, Ames Laboratory has built a homepage on the World Wide Web that will link the Lab and its technologies with people around the world.

One component of the information superhighway, the World Wide Web is an assortment of thousands of government, commercial, military and education homepages, accessible to anyone with a computer and an "on ramp," browsing software such as Netscape. Homepages convey more than words and data. They provide electronic illustrations of an organization's personality through text, pictures, sounds and videos. From Lockheed to Taco Bell to Ames Lab, numerous enterprises are connected to the Web and share information with millions of Web travelers.

"The Web is an exciting tool that adds a new dimension to our effort to communicate valuable information about the Lab to diverse audiences, such as DOE and industry leaders," says Steve

Karsjen, manager of Public Affairs and Information and contact person for the Lab's homepage.

The Ames Lab homepage went online in October 1994. Since then, nearly 60,000 people have accessed and downloaded Ames Lab information to their computers. Web travelers from Singapore to Seattle have utilized Ames Lab files an average of 190 times per day.

"I was floored when we received the first statistics showing usage of our homepage," says Karsjen. "It demonstrates how hungry people are for information about the latest research at DOE laboratories."

Not only is the large number of Ames Lab homepage visitors impressive, so is their diversity. According to Web access statis-

tics, people from Malaysia, Japan and Finland have examined the Lab's Web site, as have others from a diverse assortment of universities, research institutions and commercial businesses. "People from IBM, NASA and other DOE labs have accessed Ames Lab files. I was surprised to see J.C. Penney on the list, too," Karsjen says.

Spinning a Web Close to Home

Many Ames Lab scientists appreciate the World Wide Web's potential, and several have benefited from this exciting segment of the information superhighway.

John Gustafson, computational scientist in Applied Mathematical Sciences, describes the Web as "one of the best communication resources Ames Lab researchers have ever had. People viewing the Web get information, pictures, text and entertainment value in full color," Gustafson says. "The Web is an ideal

medium to display your research."

Since the Applied Mathematical Sciences Program became a part of the World Wide Web, Gustafson has observed two principal advantages of showcasing research and information on the Web.

"The Web is great for promoting research, and it's also a wonderful referral source that saves time and money," says Gustafson. "When someone calls about our programs, instead of spending time with them on the phone, I simply direct them to our Web pages."

Barb Helland, assistant program director for Applied Mathematical Sciences, has witnessed the information dissemination capabilities of the World Wide Web and encourages Ames Lab researchers to utilize this valuable resource.

"We have noticed an increase in calls since placing our Web pages on the Internet," says Helland. "The Internet will continue growing, and I would urge any Ames Lab program director to create Web pages that can be linked from the Ames Lab homepage."

Life in the Fast Lane

Some people assume that traveling on the information superhighway is difficult and complicated, like driving on a congested freeway during rush hour. In reality, the Web provides a very smooth ride. It involves simple procedures and standard computer equipment.

If you have a computer and access to Netscape or another browsing software, you can easily use the Web. "After learning a few simple things, it's a breeze," says Mark Bowman, communications specialist in Public Affairs. "The benefits of sharing your research with a captive, worldwide audience are

immeasurable."

Connie Bailey, communications specialist in the Environmental Technology Development (ETD) Program, helped construct ETD's homepage and describes Web page construction as fairly simple and easy.

"Creating a Web page isn't too complicated," says Bailey. "The procedures are simple, considering the enormous benefits you receive from having your information on the Web. People are starting to search the Web in the same way they would search the more established library/CD-ROM sources for information."

For additional information about adding your program's research to the Ames Lab homepage or getting started on the World Wide Web, contact Steve Karsjen or Mark Bowman

at 4-1856. Copies of the Lab's policy on Information Management for the World Wide Web are available from OAA or the Public Affairs Office on request. ■

HIGHLIGHTS OF AMES LAB'S POLICY

The Ames Lab policy governing information presented on the World Wide Web includes the following:

- Pages should be identified with Ames Lab and include the disclaimer.
- Program directors/department managers have final authority on page content.
- Servers and designated authors need to be registered with the Office of Assurance and Assessment (OAA).

The policy is available from OAA and Public Affairs and will soon be available from the Ames Lab main server.

New Employees

Deborah Bauer, Program Assistant I (Barb Helland)

Marc Brown, Program Assistant I (Barb Helland)

Ronald Forget, Plant Safety Patrol Officer (G.P. Jones)

Hanrong Gao, Postdoctoral Fellow (Robert Angelici)

Feyzi Inanc, Visiting Scientist (Joe Gray)

Alfred Kracher, Assistant Scientist II (Matthew Kramer)

Armin Mikler, Postdoctoral Fellow (Don Heller)

Frank Rioux, Visiting Scientist (Mark Gordon)

Norma Sandvick, Clerk III (Cathy Brendeland)

Uwe Schneider, Visiting Scientist (Michael Tringides)

Carl Schwichtenberg, Assistant Scientist I (Kevin Dennis)

Kristin Smith, Office Coordinator I (Nancy Anderson)

Bina Wani, Visiting Scientist (Lance Miller)

Nancy Zenor, Clerk Typist II (Cynthia Feller)

Promotions

Keith Allen from Environmental Systems Mechanic to Environmental Systems Mechanic Lead

Debra Covey from Program Coordinator I to Program Coordinator II

Cynthia Feller from Clerk III to Clerk IV

Phyllis Mann from Plant Safety Patrol Officer to Plant Safety Patrol Officer Lead

Need Money for Novel Research?

DOE's New Initiative Proposal Program Could Be the Answer

So you've got this great research idea — it's relevant, innovative and original, but your program just doesn't have the money to adequately support new experimentation. Maybe it's time to temporarily exchange your research hat for a writing hat and draft a New Initiative Proposal.

"The New Initiative Proposal Program is designed to stimulate work in new directions," says Bruce Thompson, division director for Science and Technology and the Lab's coordinator for the program, which is administered by the Division of Materials Sciences, Office of Basic Energy Sciences. "DOE labs compete for funds set aside by the Division to support new research endeavors," says Thompson. "For example, an experimental program in a new area where one did not previously exist might be created to complement a strong theoretical effort at a laboratory."

Helen Kerch, program manager in the Division of Materials Sciences, says each DOE lab is allowed to submit one proposal each year to the New Initiative Program. She explains that all proposals are peer-reviewed by at least three external reviewers from the academic or industrial community. In addition, principal investigators must give presentations on their research at the Office of Basic Energy Sciences.

"Three or four awards are given each year," says Kerch. "Awards are made for three-year periods and may be extended based on favorable review of progress. Kerch emphasizes that the New Initiative Proposal Program is the primary vehicle by which labs can get new research funded by the Basic Energy Sciences Division of Materials Sciences.

"Scientific and technical excellence are the top criteria used in selecting award winners," says Kerch. "We also look for

programmatic relevance and encourage multi-laboratory participation as well as partnerships with universities and industry."

For three consecutive years, Ames Lab has received New Initiative money as a result of the efforts of Bruce Harmon, interim deputy director and program director for Condensed Matter Physics, and Pat Thiel, program

director for Materials Chemistry, who each assembled teams of principal investigators from different program areas to work on novel research. Harmon's team received funds in FY 1994 for research on magneto-optic materials, and in FY 1995 another team with Kai-Ming Ho as principal investigator received funds for work on photonic band gap materials. Thiel's team was awarded funds for FY 1996 to investigate the surface and interface properties of quasicrystals.

Providing support for inventive research, the New Initiative Proposal Program makes it possible for fresh ideas to flourish, enhancing existing programs and perhaps leading to new ones. ■



Pat Thiel



Bruce Harmon



Kai-Ming Ho

To obtain guidelines for the New Initiative Proposal Program, contact Bruce Thompson, division director for Science and Technology, at 4-9649.

Ames Lab's World Wide Web Homepage.