

スピーカーのご略歴  
Speaker Profile

Listed in alphabetical order.





**AKEDO Jun**

Group Leader, Advanced Manufacturing Research Institute, AIST

◇Profile

University in 1984 and 1990, respectively. From 1989 to 1992, he worked as Research Associate in Department of Applied Physics Waseda University. He joined the Mechanical Engineering Laboratory, AIST-MITI, Tsukuba, Japan, in 1992. From 2001, he is the research leader of the Integration Process Technology Research Group, Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology (AIST). From 2002, he is the project leader of Nano Structure Forming for Advanced Ceramic Integration Technology Project in Japan Nano Technology Program.

**明渡 純**

産業技術総合研究所先進製造プロセス研究部門長

◇経歴

1984年早大理工学部応用物理学科卒、1988～1991年同理工学部助手をへて、1991年通産省工業技術院機械技研入所、2001年から独立行政法人・産業技術総合研究所グループ長、工学博士。専門：薄膜工学（最近は特に強誘電体材料の薄膜化とその応用）、微細加工、光応用計測。現在、エアロゾルデポジション法によるセラミックスインテグレーション技術とMEMSデバイス等を研究している。

2002年度より経済産業省ナノテクノロジープログラム・プロジェクトリーダー

◇受賞

1990年 第2回 安藤博記念学術奨励賞。

2007年 第39回 市村賞 学術貢献賞。

2007年 H19年度 文部科学大臣表彰 科学技術賞 研究部門。

2007年 第5回 産学官連携功労者表彰 科学技術政策大臣賞。

2007年 H19年度 全国発明表彰 21世紀発明賞。



**AKIBA Etsuo**

Principal Research Scientist, AIST

◇Education & Employment:

1979 : Ph D. in Physical Chemistry, The University of Tokyo, Japan  
1979 : Research Officer, National Chemical Laboratory for Industry  
1983-1984 : National Research Council Canada, Ottawa, Canada Research Associate  
1991 : Laboratoire de Cristallographie, CNRS, Grenoble France, Visiting Scientist  
1997 ~ : Adjunct Professor of Utsunomiya University, Japan  
2001 ~ : Principal Research Scientist, National Institute of Advanced Industrial Science and Technology  
2006 ~ Adjunct Professor of Hiroshima University, Japan  
Adjunct Professor of Kyushu University, Japan

◇Honors and Awards:

1997 : The Technical Development Award, the Japan Institute of Metals, Japan  
1998 : The Ichikawa Prize in Technology, New Technology Development Foundation, Japan  
1999 : AIST Director-General's Award, Ministry of International Trade and Industry, Japan.  
2000 : The 59th Notable Invention Award of the Science and Technology Agency, Japan.

◇Research Interests:

: Hydrogen storage materials  
: Crystal structure analysis using the Rietveld method  
: Defects in the metallic materials  
: Hydrogen energy systems and Energy policy

◇Some of International Activities

1996 ~ International Steering Committee Member of the International Symposium on Metal-Hydrogen Systems.  
2001-2004 Technical Program Committee Member of 14th World Hydrogen Energy Conference (Montreal, Canada) and Organizing Committee Member of 15th World Hydrogen Energy Conference (Yokohama, Japan)  
2005-2009 Vice-Chair (2007) and Chair (2009) of Gordon Research Conference: Hydrogen-Metal Systems

◇Domestic Research Activities

Official Project Leader of "Fundamental Research Project on Advanced Hydrogen Storage Materials" that starts fiscal year of 2007 and the Leader of the Hydrogen Storage Materials R & D in "Development for Safe Utilization and Infrastructure of Hydrogen". Both are major activities of Japanese R & D of hydrogen storage materials conducted by the Government.

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## 秋葉悦男

### 産業技術総合研究所主幹研究員

#### ◇学歴

- 1974年3月 埼玉大学理工学部化学科卒業
- 1976年3月 東京大学大学院理学系研究科化学専門課程修士課程修了
- 1979年3月 東京大学大学院理学系研究科化学専門課程博士課程修了（理学博士）

#### ◇研究歴

- 1979年4月 通商産業省工業技術院東京工業技術試験所(当時)(現(独)産業技術総合研究所)入所
- 1983年9月～1984年9月 カナダ, National Research Council, Research Associate(博士研究員)
- 1991年8月～1991年11月 フランス, CNRS, Lab de Cristallographie, 客員研究員
- 2001年4月 機構改革により 独立行政法人産業技術総合研究所電力エネルギー研究部門 総括研究員
- 2004年7月 機構改革により 独立行政法人産業技術総合研究所エネルギー技術研究部門 総括研究員
- 2006年7月 独立行政法人産業技術総合研究所エネルギー技術研究部門 主幹研究員

#### ◇教育歴

- 1997年4月～ 宇都宮大学大学院工学研究科エネルギー環境科学専攻併任(連携大学院) 客員教授
- 2004年4月～ 大阪大学工学系研究科マテリアル科学専攻 非常勤講師
- 2006年4月～ 広島大学先進機能物質研究センター 客員教授
- 2006年4月～ 九州大学工学研究院 客員教授

- 2001年5月～2004年3月 京都大学大学院工学研究科材料工学専攻 非常勤講師
- 2002年4月～2003年3月 東京工業大学大学院工学研究科化学工学専攻 非常勤講師
- 2002年4月～2003年3月 中央大学大学院理工学研究科応用化学専攻 兼任講師
- 2005年2月～2006年3月 広島大学自然科学研究支援開発センター 客員研究員
- 2006年1月～2006年3月 九州大学工学研究院機械科学部門 非常勤講師

#### ◇専門分野

材料科学、水素エネルギー、結晶構造解析(リートベルト解析)

#### ◇受賞

- (社)日本金属学会 技術開発賞 (1997年9月)  
「新エネルギーキャリアとしての高容量水素吸蔵合金」
  - (財)新技術開発財団 市村学術賞 貢献賞 (1998年4月)  
「高性能水素輸送用水素吸蔵合金の研究開発」
  - 通商産業省 平成11年度通商産業省研究業務優秀者表彰工業技術院長表彰(1999年6月)  
「水素吸蔵合金の高容量化およびリチウム電池正極材料の研究」
  - 科学技術庁 平成12年度注目発明 (2000年4月)  
「水素吸蔵合金とその製造方法」
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**Thomas BOWLES**

Science Advisor to New Mexico Governor Bill Richardson / Chief Scientist (On Leave), Los Alamos National Laboratory

Thomas Bowles was appointed as Science Advisor for New Mexico Governor Bill Richardson in July 2006. As the Science Advisor, Bowles is responsible for providing advice to the Governor on science and technology (S&T) issues, integrating S&T activities across New Mexico, and working with the national laboratories, universities, and industry in New Mexico to advance collaborations and couple advances in S&T into the public sector.

Prior to his appointment as Science Advisor, Bowles served for two years as the Chief Science Officer (CSO) of Los Alamos National Laboratory. In that role, he was responsible for oversight of the full range of science carried out at the Laboratory. Those responsibilities included serving as a member of the senior executive board, having oversight for more than \$100M a year in discretionary research funds, having oversight over all external scientific reviews and strategic science planning, serving as the Laboratory's principal contact with universities and other institutions, and ensuring the vitality of the scientific staff.

Bowles came to Los Alamos in 1979 to establish an effort in weak interaction physics that has gone on to be recognized as one of the leading efforts in the world. He has been a key player in several international neutrino experiments and the principal investigator on a fundamental symmetries program.

During his time at the Laboratory, Bowles has served in a variety of positions and received a number of awards, including the M.A. Markov Prize that was awarded by the Institute for Nuclear Research of the Russian Academy of Sciences for his work as a principal investigator of the Soviet-American Gallium Experiment, a major solar neutrino investigation. In addition to being both a Laboratory Fellow and a Fellow of the American Physical Society, Bowles is an affiliate professor at the University of Washington. He has served on numerous laboratory and national committees, advisory panels, and editorial boards, including the Department of Energy and National Science Foundation's Nuclear Science Advisory Committee. Bowles earned his bachelor's degree in physics and mathematics from the University of Colorado and his doctoral degree in physics from Princeton University.

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## DOI Ryoji

Director, Research and Development Division, Industrial Science and Technology  
Policy and Environment Bureau, METI

### ◇Education

1984 B.E., Engineering, The University of Tokyo  
1986 M.E., Engineering, Asian Institute of Technology

### ◇Experience

1986 Joined the Ministry of International Trade and Industry (MITI)  
2002-2003 Special Assistant to Director General, Nuclear and Industrial Safety Agency,  
Ministry of Economy, Trade and Industry (METI)  
2003-2004 Director for R&D Planning, Industrial Science and Technology Policy and  
Environment Bureau, METI  
2004-2005 Senior Director for Innovation Strategy Planning, Industrial Science and Technology  
Policy and Environment Bureau, METI  
2005-2006 Director for Science and Technology Basic Policy Planning, Bureau of Science and  
Technology Policy, Cabinet Office  
2006-2007 Director for Competition Enhancement Office, Industrial Organization Division,  
Economic and Industrial Policy Bureau, METI  
2007-present Director, Research and Development Division, Industrial Science and Technology  
Policy and Environment Bureau, METI

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## 土井良治

経済産業省産業技術環境局研究開発課長

### ◇学歴

1984 東京大学工学部土木工学科卒業  
1986 Asian Institute of Technology ; Structural Eng. & Construction Div. 修了

### ◇職歴

1986年4月 通商産業省 入省  
1991年6月 資源エネルギー庁国際資源課 課長補佐  
1993年6月 JETROニューヨーク 機械工業部長  
1996年6月 資源エネルギー庁原子力産業課 課長補佐  
1999年6月 通商産業省産業政策局総務課 課長補佐  
2001年1月 経済産業省原子力安全・保安院 課長補佐  
2002年7月 " 政策企画官  
2003年7月 経済産業省産業技術環境局研究開発課 企画官  
2004年4月 " 産業技術政策課 統括技術戦略企画官  
2005年1月 内閣府科学技術基本政策担当室 次長  
2006年4月 経済産業省経済産業政策局競争環境整備室 室長  
2007年7月 経済産業省産業技術環境局 研究開発課長

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**Matthew ENNIS**

Vice President, Business Development, Lumidigm

Dr. Ennis is responsible for strategic business development at Lumidigm. He has been involved in the commercialization and business development surrounding novel technology for over ten years. For four years, Dr. Ennis was the founding President and Chief Executive Officer of Argus Insights (AI) where he was responsible for strategic growth and business development. AI included a multifaceted team of PhDs, MBAs, scientists, anthropologists, and historians doing strategic market research and development for national clients. AI's work has been distributed in over 25 countries.

Prior to founding AI, Dr. Ennis served as President and co-founder of Sunfish Laboratories, a New Mexico-based diagnostic company. Earlier, he served as Director of Business Assistance and Project Development for Technology Ventures Corporation (TVC), a high-technology business assistance company that is a subsidiary of Lockheed Martin Corporation. At TVC, he assisted firms in defining their value proposition and obtaining startup capital from venture capitalists, strategic partners, and angel investors.

Dr. Ennis earned his PhD in chemistry working with Dr. Jim Collman at Stanford University. He received his formal business education at the University of New Mexico. Prior to his graduate work he graduated magna cum laude from Bowdoin College with departmental honors.

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## ISHIDA Toru

Director-General, Industrial Science and Technology Policy and Environment  
Bureau, METI

### ◇Education

1975 Graduated from the University of Tokyo, Degree in Economics  
1980 Columbia University

### ◇Career

1975 Entered the Ministry of International Trade and Industry (MITI)  
1989 Director for Public Relations for Nuclear Energy Policy,  
1990 Counsellor for Diet Affairs, Minister's Secretariat  
1991 Director, Information Systems Development Division, Machinery and Information  
Industries Bureau  
1992 Executive Assistant to the Minister of International Trade and Industry  
1993 Director, Electric Power Developing Division, Public Utilities Department, Agency of  
Natural Resources and Energy (ANRE)  
1995 Director-General, Dusseldorf Center, Japan External Trade Organization  
1998 Director, Planning Division, Public Utilities Department, ANRE  
1999 Director, General Affairs Division, Machinery and Information Industries Bureau  
2000 Executive Assistant to the Prime Minister  
2001 Director, Policy Planning and Coordination Division, Minister's  
Secretariat  
2002 Deputy Director-General, Minister's Secretariat  
2002 Assistant Vice-Minister, Minister's Secretariat  
2005 Director-General, Trade and Economic Cooperation Bureau  
2007 Present position

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## 石田 徹

経済産業省産業技術環境局長

### ◇学歴

昭和50. 3 東京大学法学部卒業

### ◇職歴

昭和50. 4 通商産業省入省(基礎産業局総務課)  
平成元. 6 資源エネルギー庁長官官房総務課原子力広報推進企画官  
(併)国際原子力企画官  
2. 2 大臣官房参事官(国会担当)  
3. 5 機械情報産業局情報処理システム開発課長  
4. 12 通商産業大臣秘書官  
5. 8 資源エネルギー庁公益事業部開発課長  
7. 6 日本貿易振興会・独デュッセルドルフセンター所長  
10. 6 資源エネルギー庁公益事業部計画課長  
11. 6 機械情報産業局総務課長  
12. 4 内閣総理大臣秘書官  
13. 7 大臣官房企画課長  
14. 7 大臣官房審議官  
15. 7 大臣官房総括審議官  
17. 9 貿易経済協力局長  
19. 7 産業技術環境局長

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**Gary JONES**

Manager, International Relationship Development, Sandia National Laboratories

Dr. Gary Jones is Manager of International Relationship Development in the Strategic Relationships Center at Sandia National Laboratories. In this role he is responsible for facilitation, coordination, and policy definition for the Laboratories' international partnering activities, and is involved in developing Sandia strategies for expanded global engagement. In addition, Gary focuses on strategic business development for the Integrated Technology and Systems Strategic Management Group with special emphasis on the Laboratories' energy, resources, environment, critical infrastructure, and non-proliferation programs.

Gary served as an adjunct member of Sandia's Advanced Concepts Group (ACG) for many years. He was one of the principal architects of programs targeting middle class formation through technology-based economic development in the developing world. These programs have led to the establishment of the Bi-National Sustainability Laboratory in Santa Teresa, NM, and the proposed Jordan Science and Technology Initiative in Amman, Jordan.

Prior to his current position, Gary spent 17 years working in Sandia's renewable energy programs, serving in several roles including manager of the Laboratories' photovoltaics and renewable energy programs. In 1993 Dr. Jones left these positions to spend two years as the senior technical advisor to the Solar Energy Industries Association and the US Export Council for Renewable Energy under a government-industry partnership agreement. He has represented these latter organizations, Sandia, the US Department of Energy, USAID and UN/ESCAP in energy project activities in over twenty countries.

Dr. Jones served as Chairperson and Vice-Chairperson of Rural Electrification for African Development from 1991 to 2003, which he helped found in 1991. This organization has been involved in rural electrification initiatives in numerous countries in Southern and Western Africa. Dr. Jones has published over 70 papers and articles, the majority dealing with renewable energy technology and international development. Gary has a Bachelors Degree in Physics from the University of Dayton and a Doctorate in Physical Metallurgy from Iowa State University

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## **Elizabeth KUUTTILA**

President & CEO, Science and Technology Corporation

### ◇Education

BS – Electrical Engineering – University of Michigan  
MS – Public Administration – Iowa State University  
Venture Capital Institute

### ◇Business/Research Background

Ms. Kuuttila joined STC.UNM in 2003 with more than 20 years of leadership experience in technology commercialization and licensing. This includes positions as Assistant Vice President for Technology Commercialization at Purdue Research Foundation; Director, Technology Commercialization, University of Georgia; and Director, Office of Technology Commercialization, Center for Advanced Technology Development, Iowa State University. Her prior experience includes a consulting practice that provided strategic marketing and technology-transfer consulting services for a wide variety of well-known technology corporations, universities and foundations, including Stanford University. Lisa began her career in industry in several engineering and technology marketing positions.

### ◇Particular Knowledge and Skills

Ms. Kuuttila has exhibited exceptional skills in the marketing and start-up company aspects of technology commercialization, having significantly increased the number of spin-off companies at each university she has served. She has substantial expertise in university-based equity transactions. She managed the seed capital venture fund on behalf of Purdue Research Foundation, making investments in Purdue start-ups. She has published extensively in her field and has made presentations throughout her career at the Association of University Technology Managers (AUTM), the Association of University Research Parks (AURP), the Licensing Executives Society (LES), and other regional and national conferences and forums.

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**MATSUMI Yoshio**

Adviser, ITOCHU Corporation / Director, ITOCHU Research Institute of  
Innovative Technology

◇Education:

1969 BA, English Department, Osaka University of Foreign Studies, Osaka, Japan  
1970-1971 Graduate study at Department of Regional Studies: Soviet Union, Graduate School of Arts and Sciences, Harvard University, Cambridge, MA, USA  
1998 Executive Education, Graduate School of Business Administration, Harvard University, Cambridge, MA, USA

◇Business Experiences:

1969-1977 ITOCHU Corporation  
Tokyo Head Office, Tokyo, Japan  
1969 Staff, Accounting Department  
1971 Staff, USSR and East Europe Team, Overseas Administration Department  
1977-1994 ITOCHU International Inc., New York, NY, USA  
1977 Manager, Corporate Project Planning and Development Department  
1985 Manager, Electronics Department  
1992 Vice President, Aerospace & Electronics Division  
Secretary and Treasurer of ITOCHU Entertainment Inc.  
(for investment in Time Warner)  
1993 Vice President, Aerospace & Electronics Division  
General Manager of Atlanta Branch Office  
1994 Vice President and General Manager, Development & Venture Division  
1995-1997 ITOCHU Corporation, Tokyo Head Office, Tokyo, Japan  
1995 Deputy General Manager, Multimedia Business Department,  
Aerospace & Electronics Division  
1995 Division Vice President, Aerospace & Electronics Division  
1997-1999 ITOCHU International Inc., New York, NY, USA  
Senior Vice President and General Manager, Aerospace & Electronics Division  
2000-2004 ITOCHU Corporation, Tokyo Head Office, Tokyo, Japan  
Executive Councillor, International Affairs  
General Manager, Innovative Technology Business Development Office,  
Corporate Planning Group  
2004-2007 ITOCHU Corporation, Tokyo Head Office, Tokyo, Japan  
Executive Officer  
General Manager, Innovative Technology Business Development Office  
2007 ITOCHU Corporation, Tokyo Head Office, Tokyo, Japan  
Executive Officer  
Director, ITOCHU Research Institute of Innovative Technology  
2007 ITOCHU Corporation, Tokyo Head Office, Tokyo, Japan  
Adviser  
Director, ITOCHU Research Institute of Innovative Technology

◇Other activities:

Member of the Advisory Group of Biomass Nippon (Japan) Integrated Strategy of the Japanese Government  
Member of the Intellectual Property Strategy Committee of the National Council for Science and Technology Policy of the Japanese Government  
Vice Chairman of Nano-biotechnology Committee of the Nanotechnology Business Creation Initiative

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## 松見芳男

伊藤忠商事株式会社顧問/伊藤忠先端技術戦略研究所長

### ◇学歴

昭和44年3月 大阪外国語大学英語学科卒業  
昭和45年6月 ハーバード大学大学院 地域研究学部(ソ連)  
平成10年2月 ハーバード大学経営大学院(GMP)

### ◇職歴

昭和44年4月 伊藤忠商事株式会社入社(営業経理部)  
昭和46年9月 伊藤忠商事株式会社 海外総括部 ソ連東欧チーム  
昭和52年5月 伊藤忠北米総支配人付 開発担当(ニューヨーク駐在)  
昭和60年1月 伊藤忠アメリカ エレクトロニクス部(ニューヨーク駐在)  
平成5年10月 伊藤忠インタナショナル アトランタ支店長兼務(ニューヨーク駐在)  
平成6年1月 伊藤忠インタナショナル Development & Venture部長(ニューヨーク駐在)  
平成7年1月 伊藤忠商事株式会社 マルチメディア事業部長代行  
平成7年11月 伊藤忠商事株式会社 宇宙情報部門長補佐  
平成9年4月 伊藤忠インタナショナル 宇宙情報部門長(ニューヨーク駐在)  
平成12年1月 伊藤忠商事株式会社 宇宙情報マルチメディアカンパニー バイスプレジデント  
平成12年4月 伊藤忠商事株式会社 海外管掌役員付(兼)経営企画担当役員付  
平成12年6月 伊藤忠商事株式会社 審議役  
平成12年8月 伊藤忠商事株式会社  
海外管掌役員付(兼)経営企画役員付(兼)バイオビジネス開発室長  
平成16年6月 伊藤忠商事株式会社 執行役員  
先端技術戦略室長  
平成19年4月 伊藤忠商事株式会社 執行役員  
伊藤忠先端技術戦略研究所長  
平成19年6月 伊藤忠商事株式会社 顧問  
伊藤忠先端技術戦略研究所長

### ◇その他

平成14年6月 バイオマス・ニッポン総合戦略策定アドバイザーグループ委員  
平成15年3月 バイオマス・ニッポン総合戦略推進アドバイザーグループ委員  
平成15年12月 ナノテクノロジービジネス推進協議会バイオ・医薬・化粧品分科会主査  
平成19年1月 内閣府総合科学技術会議知的財産戦略専門調査会専門委員

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**MIYATA Seizo**

Senior Program Manager, NEDO

◇EDUCATION

1969 Graduate School, Chemistry Ph.D.  
Tokyo Institute of Technology

◇EXPERIENCE

1969~1970 Lecturer, Tokyo University of Agriculture & Technology  
1970~1986 Associate Professor, Tokyo University of Agriculture & Technology  
1982~1983 Visiting Professor, California Institute of Technology  
1984 Visiting Researcher, AT & T Bell Laboratories  
1986 Professor, Tokyo University of Agriculture & Technology  
1994~1996 Vice President, Polymer Society, Japan  
1994~1996 Chairman, Explore Committee of Fundamental Technology for Fiber Industry,  
Ministry of International Trade and Industries.  
1995~1998 Member of Science and Technology Council, Ministry of Education  
1995~2001 Dean, Graduate School of Tokyo University of Agriculture & Technology  
1997~1998 Vice President, The Society of Fiber Science and Technology, Japan  
1999~2002 President, The Society of Fiber Science and Technology, Japan  
2001~2004 Chairman, International Exchange Committee of The Japan Association of National  
University  
2002~2004 Technical member of university division of The Council of Education, MEXT  
2003~2005 Member of University Mobility in Asia and the Pacific  
2001~2005 President, Tokyo University of Agriculture and Technology  
2005~present Senior Program Manager, New Energy and Industrial Technology Department  
Organization(NEDO)  
Professor Emeritus, Tokyo University of Agriculture and Technology  
Professor, Tokyo Institute of Technology  
Visiting Professor, Waseda University  
Visiting Professor, Keio University

◇HONOR

1985 ; Award of Polymer Society, Japan,.  
2002 ; SPSJ Award for Outstanding Achievement in Polymer Science and Technology,  
2004 ; Ordre des Palmes Academiques, Officier  
2005 ; Award for Outstanding Achievement The Society of Fiber Science and Technology,  
Japan

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## 宮田清藏

NEDO技術開発機構シニアプログラムマネージャー

### ◇学歴

昭和39年3月 東京教育大学理学部化学科卒業  
昭和41年3月 東京工業大学大学院 理工学研究科 修士課程修了  
昭和44年3月 東京工業大学 大学院理工学研究科 博士課程修了

### ◇学位

工学博士(昭和44年3月 東京工業大学)

### ◇職歴

昭和44年6月 東京農工大学工学部 講師  
昭和45年5月 東京農工大学工学部 助教授  
昭和57年4月～58年3月 カリフォルニア工科大学客員教授  
昭和59年8月 ヘル研究所 客員研究員  
昭和61年 東京農工大学 教授  
平成6年～平成8年 高分子学会副会長  
平成7年4月～13年4月東京農工大学大学院生物システム応用科学研究所教授・研究科長  
平成7年～平成10年文部省重点領域研究「有機非線形光学材料」研究代表者  
平成9年～平成10年 繊維学会副会長  
平成11年～平成14年 繊維学会会長  
平成13年5月～平成17年4月末 東京農工大学長  
平成17年5月～現在 NEDO技術開発機構 シニアプログラムマネージャー  
平成17年5月～現在 東京農工大学 名誉教授、東京工業大学 特任教授

### ◇賞罰 高分子学会賞(昭和60年)

高分子学会功績賞(平成15年)  
フランス政府教育功労賞オフィシエ(平成16年)  
繊維学会功績賞(平成17年)

### ◇専門分野

有機及び高分子材料の電気光学物性

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**MORI Yusuke**

Professor, Osaka University

◇Study Field / Current Study Theme

Development of borate nonlinear optical material CsLiB6O10 and application of solid-state UV laser

Growth of high quality protein crystals by using laser irradiation and solution stirring

Growth of high quality bulk GaN, AlN and SiC by liquid phase epitaxy from solution

◇Research Interest

I have interested in controlling the nucleation and growth processes that are important for growing high-quality, large crystals of oxide, nitride, or protein from solution. I have succeeded to discover nonlinear optical material CsLiB6O10 and develop crystal growth technology. I have applied this growth technology to protein and nitride crystallization. This method is very useful to grow high quality membrane protein crystal that is important for drug design.

◇Educational Backgrounds (after high school)

1985-1989 Department of Electrical Engineering, Faculty of Engineering, Osaka University

1989-1991 Department of Electrical Engineering, Graduate School of Engineering, Osaka University

1996 Ph.D in Engineering (Osaka University)

◇Professional Backgrounds

1993-1999. Research Associate, Department of Electrical Engineering, Graduate School of Engineering, Osaka University

1999-2000. Lecturer, Department of Electrical Engineering, Graduate School of Engineering, Osaka University

2000-2007. Associate Professor, Department of Electrical Engineering, Graduate School of Engineering, Osaka University

2005-Present. Representative Director, SOSHO, Inc.

2007-Present. Professor, Department of Electrical, Electronic and information Engineering, Graduate School of Engineering, Osaka University

◇Awards

1996 Award for Published Papers of the Institute of Electrical Engineers of Japan

1996 Award for Papers of Japanese Association for Crystal Growth

1996 Commendation for Greatest Progress of the Laser Society of Japan

1997 Ichimura Award for Concepts of the New Technology Development Foundation

1999 Commendation for Excellence of the KSVF Venture Business Grand Prix

2000 Commendation for Greatest Progress of the Laser Society of Japan

2001 Commendation for Excellence of the KSVF Venture Business Grand Prix

2003 Marubun Academic Achievement Award of the Marubun Research Promotion Foundation

2005 Award for Achievements (Papers) of the Laser Society of Japan

2005 The 21st Mr. Kenjiro Sakurai Commemoration Award

2006 Grand Prix of the 16th Nikkei BP Technology Commendation

2006 Minister in Charge of Science and Technology Policy's Commendation of the 4th Contributors to Industry-University-Public Sector Cooperation

2007 Minister of Education, Culture, Sports, Science and Technology commendation (Science and Technology Prize)

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## 森 勇介

大阪大学大学院教授

### ◇学歴

平成 元年 3月 大阪大学工学部電気工学科卒業  
平成 元年 4月 大阪大学大学院工学研究科  
電気工学専攻博士前期課程入学  
平成 3年 3月 同上修了  
平成 3年 4月 大阪大学大学院工学研究科  
電気工学専攻博士後期課程入学  
平成 5年 3月 同上中退

### ◇職歴

平成 5年 4月 大阪大学助手(工学部)  
平成10年 4月 大阪大学助手(大学院工学研究科)  
平成11年 5月 大阪大学講師(大学院工学研究科)  
平成12年10月 大阪大学助教授(大学院工学研究科)  
平成17年 7月 株式会社創晶代表取締役(兼業)  
平成19年 4月 大阪大学准教授(大学院工学研究科)  
平成19年 5月 大阪大学教授(大学院工学研究科)

### ◇学位

平成 8年 3月 博士(工学)(大阪大学)

### ◇受賞

平成 8年 3月 電気学会論文発表賞  
平成 8年 5月 レーザー学会進歩賞  
平成 8年 7月 日本結晶成長学会論文賞  
平成 9年 4月 新技術開発財団市村賞  
平成11年 5月 KSVFベンチャーアイデア大賞・優秀賞  
平成12年 5月 レーザー学会進歩賞  
平成13年 3月 KSVFベンチャービジネス大賞・優秀賞  
平成15年12月 丸文研究交流財団・丸文学術賞  
平成17年 5月 レーザー学会業績賞(論文賞)  
平成17年12月 第21回櫻井健二郎氏記念賞  
平成18年 4月 第16回日経BP技術賞大賞  
平成18年 6月 第4回産学官連携功労者表彰科学技術政策担当大臣賞  
平成18年 7月 第20回独創性を拓く先端技術大賞特別賞  
平成18年10月 第1回モノづくり連携大賞・特別賞  
平成19年 3月 大阪大学教育・研究功績賞  
平成19年 4月 文部科学大臣表彰(科学技術賞・研究部門)

### ◇研究活動

ポレート系非線形光学結晶の研究開発  
フラックス法によるバルク窒化物結晶育成に関する研究開発  
有機非線形光学結晶の研究  
新しいタンパク質結晶育成技術の研究開発  
レーザーのバイオ医療応用に関する研究開発

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## NAKAMURA Michiharu

Fellow, Hitachi, Ltd.

### ◇Biography

Dr. Michiharu NAKAMURA joined the Central Research Laboratory (CRL) of Hitachi, Ltd. in 1967, after receiving his M.Sc. degree in Physics from the Graduate School of Science at the University of Tokyo. He worked on the development of novel electronics devices and their commercialization, and contributed to the incubation of distributed feedback semiconductor lasers and high-speed electronics that are widely used in optical communication networks today. He received his Ph.D. degree from the University of Tokyo in 1975 for related research. In 1992, he became the 10th General Manager of Hitachi CRL. In 2001, he assumed the position of Head of the Research and Development Group of Hitachi, Ltd., a position he held until April 2004 when he was appointed Executive Vice President and Executive Officer of Hitachi, Ltd., and Group CTO of the Hitachi Group. He assumed his current position of Hitachi Fellow in April 2007.

Dr. Nakamura is a Fellow of the IEEE and IEICE, and a member of The Japan Federation of Engineering Societies, and other societies in physics. He is currently serving as the Chairman of the Sub-Committee on Strategies for R&D Priority Areas of the Japan Business Federation.

### ◇Preferred Topics and Keywords

Innovation from industrial point of view

Industry-academia

Collaboration

Nanotechnology & Materials

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## 中村道治

株式会社日立製作所フェロー

### ◇学歴

昭和42年 3月 東京大学大学院理学系研究科物理修士課程修了

### ◇職歴

昭和42年 4月 株式会社 日立製作所入社 中央研究所勤務

平成 4年 8月 同社 中央研究所 所長

平成13年 6月 同社 常務 研究開発本部長

平成15年 6月 同社 執行役専務 研究開発本部長

平成16年 4月 同社 執行役副社長

平成19年 4月 同社 フェロー

### ◇学位

理学博士

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## **William TUMAS**

Program Director, Alternative Energy and Infrastructure, SPO-AEI, Los Alamos  
National Laboratory

### ◇Education

- B.A. Chemistry, summa cum laude, Ithaca College, 1980
- Kinetic isotope effects and mechanisms of elimination reactions
- Ph.D. Organic Chemistry, Stanford University, John Brauman, 1985
- NSF and Hertz Fellow; Dynamics and reaction mechanisms of gas phase negative ions
- Postdoctoral Fellow with RH Grubbs, Caltech, 1985-87
- NIH and Chaim Weizmann Fellowships; Photochemistry of Metallacyclobutanes

### ◇Professional Experience

- DuPont Central Research, 1987-93
- Project leader oxidation and environmental catalysis
- Member, Dupont Corporate Environmental Technology Panel
- Los Alamos National Laboratory, 1993-present
- Technical Staff Member, 1993-1995
- Group Leader of Inorganic Chemistry group, 1996-2005
- Director, Institute for Hydrogen and Fuel Cell Research, 2004- present
- Program Manager for hydrogen and alternative/renewable energy, 2005-2006
- Program Director, Alternative Energy and Infrastructure, 2006-present.

### ◇Professional Activities

- Research activities have included:
  - chemical hydrogen storage
  - homogeneous and phase-separable catalysis
  - catalytic transformations and chemical processing in supercritical fluids and alternate reaction media
  - green chemistry
  - waste treatment technology development and assessment.
- Co-Editor, Chemical Reviews Special Issue on "Hydrogen" to appear October 2007
- Co-editor of Oxford Press book on "Green Chemistry Using Liquid and Supercritical Carbon Dioxide"
- Over 45 papers and 8 patents issued or filed
- Committee of Visitors, DOE Office of Science Basic Energy Sciences, April 2005.
- Over 50 invited presentations including invited talks at seven different Gordon Research Conferences.
- Chair, Gordon Conference on Environmentally Benign Synthesis, New Hampshire, 8/98.
- Founding board member of the Green Chemistry Institute (1997-2002) which is now part of the American Chemical Society
- Visiting Scientist, National Institute of Materials and Chemistry, Tsukuba, Japan, 2/00.
- Participated on four National Research Council committees including Decadal Survey of Aerospace R&D and 5 years on the NRC Committee on Review and Evaluation of the Army Chemical Stockpile Disposal Program where he contributed to 10 NRC reports.

### ◇Short Biographical Sketch

Dr. William Tumas is the Program Director for Alternative Energy and Infrastructure (SPO-AEI) at Los Alamos National Laboratory where he is responsible for applied energy programs in renewable energy, infrastructure, and energy efficiency. From 2005-2007, he was also the lead

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principal investigator of the DOE Center of Excellence for Chemical Hydrogen Storage which comprises seven universities, four companies and two national laboratories including LANL. Since 2004, he has been the Institute Director of the Los Alamos Institute for Hydrogen and Fuel Cell Research. From 2005-2006, he was also a Program Manager for the Office of Energy and Environment Initiatives at Los Alamos National Laboratory. From 1994-2005, Dr. Tumas was the group leader of the inorganic chemistry group which consisted of over 60 technical staff. Prior to joining Los Alamos, he was a research chemist, then a project leader in environmental and oxidation catalysis at DuPont Central Research, Wilmington, DE where he was also a member of the DuPont Corporate Catalysis Center and the Corporate Environmental Technology Panel.

Bill received his B.A. in Chemistry, summa cum laude, from Ithaca College in 1980. He received his Ph.D. in Organic Chemistry from Stanford University in 1985 as a NSF Graduate Fellow and a Hertz Foundation Fellow where he studied the dynamics and reaction mechanisms of gas phase negative ions. He carried out postdoctoral research in organometallic chemistry at the California Institute of Technology from 1985-87 under a NIH and a Chaim Weizmann Postdoctoral Fellowship with Professor Robert Grubbs, who was awarded the 2005 Nobel Prize in Chemistry. Dr. Tumas's research activities have included chemical hydrogen storage, homogeneous and phase-separable catalysis, catalytic transformations and chemical processing in supercritical fluids and alternate reaction media, green chemistry, and waste treatment technology development and assessment. He is the co-editor of a Chemical Reviews thematic issue on "Hydrogen" to be published in October 2007 as well a book on "Green Chemistry Using Liquid and Supercritical Carbon Dioxide". He has over 45 peer-reviewed publications and has given over 50 invited presentations including invited talks at seven different Gordon Research Conferences. He chaired the 1998 Gordon Conference on Green Chemistry. He was a founding board member of the Green Chemistry Institute which is now part of the American Chemical Society. He was also a Visiting Scientist at the National Institute of Materials and Chemistry in Tsukuba, Japan in February 2000.

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**Chris WOOD**

Vice President, The Santa Fe Institute

C. C. Wood is Vice President of the Santa Fe Institute. Dr. Wood received his Ph.D. from Yale University in 1973. Following a postdoctoral appointment at Walter Reed Army Institute of Research in Washington DC, he returned to Yale as a faculty member with joint appointments in the Departments of Psychology, Neurology, and Neurosurgery. Dr. Wood left Yale in 1989 to lead the Biophysics Group at Los Alamos National Laboratory, a position he held until becoming the Santa Fe Institute's Vice President in 2005. At Los Alamos, Dr. Wood's group was responsible for a wide range of biophysical and physical research, including protein crystallography, quantum information, and human brain imaging.

During 2000-2001, he served as interim director of the National Foundation for Functional Brain Imaging, a collaboration involving Harvard / Massachusetts General Hospital, University of Minnesota, and a number of academic and research institutions in New Mexico devoted to the development and application of advanced functional imaging techniques to mental disorders. Dr. Wood's research interests include imaging and modeling the human brain, computational neuroscience, and biological computation.

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## YAMAMOTO Takafumi

President & CEO, TOUDAI TLO, Ltd.

### ◇Profile

March, 1985, Bachelor of Economy, Chuo University

April, 1985, Joined HR Division, Recruit Co., Ltd.

In 1998, Transferred to Technology Licensing Group (Recruit)

April, 2000, Promoted to Director of Technology Management Division

July, 2000, Joined Center for Advanced Science Technology Incubation Ltd. (CASTI) as President & CEO (April, 2004, Company name is changed to TOUDAI TLO, Ltd.)

Takafumi Yamamoto is the CEO & President of TOUDAI TLO, Ltd. (CASTI), which is a technology licensing organization of the University of Tokyo.

He heads the primary technology licensing office for Japan's top school - the University of Tokyo. He had work experiences at Recruit Co., Ltd. As a planner of new business development and technology transfer from universities to industries. He established the Technology Management Division at Recruit, Ltd. After the experiences, he joined TOUDAI TLO in July 2000.

### ◇Other titles

- Member of Sangyo-koza Shingikai (METI)
- Board Member of Japan Association for University Intellectual Property and Technology Management
- Board Member of Licensing Executives Society (LES) Japan
- Board Member of Intellectual Property Association of Japan

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## 山本貴史

東京大学TLO代表取締役社長兼CEO

### ◇経歴

1985年 中央大学経済学部経済学科卒業

1985年 株式会社リクルート入社

1998年7月 テクノロジー・ライセンス・グループを新設し、技術移転事業を開始

2000年4月 テクノロジー・マネジメント・ディビジョン事業部長

2000年6月 同社退職

2000年7月 株式会社先端科学技術インキュベーションセンター代表取締役社長就任  
(2004年4月に株式会社東京大学TLOに社名変更)

### ◇他の役職

- 産業構造審議会臨時委員 (経済産業省主催)
- 大学知財管理・技術移転協議会 理事
- 日本ライセンス協会(LES)理事
- 日本知財学会 理事

### ◇主な著書

- 「理工系のための特許・技術移転入門」(共著)岩波書店
  - 「動き出した産学官連携」(共著)中央経済社
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