



August 2000 Newsletter

Chair's Message: August, 2000

As is our custom, the August edition of the DLS newsletter is accompanied by the annual election ballot. I urge all DLS members to help by voting to select the governorship of our division for the coming year. I would also like to take this opportunity to thank our nominating committee consisting of Andy Tam (chair), Paul Houston, and Dan Grischkowsky for finding a superb slate of candidates to run in this year's election.

Also included on this year's ballot is a line item regarding the proposed DLS Bylaws. These bylaws are based in part on the Bylaws of the Laser Science Technical Group (out of which DLS grew), and in part on the Bylaws of other APS divisions. These new Bylaws have been approved by the DLS Executive Committee and are in the process of being approved by the APS Council. The last and crucial step before they are adopted is a positive vote of our membership. Please take this opportunity to vote on the bylaws that will govern our division in the future.

I am personally looking forward to our upcoming annual meeting, ILS-XVI, which will be held in Providence Rhode Island, October 22-26, 2000. Great thanks are due to Lewis Rothberg, General Chair, to Ian Walmsley and Louis DiMauro, Program Co-Chairs, and to their Program Committee for putting together a superb technical program. Special events of interest to the membership include our Annual Business Meeting, Wednesday, October 25th from 5:15-7:00 pm in Convention Center Room 556A, which is open to all DLS members and at which input from the membership is solicited regarding the future and direction of DLS programs and functions. The Business Meeting will be followed at 7:00 pm by the DLS reception at the Westin Hotel and the Annual DLS Banquet at 7:30 pm, also held at the Westin Hotel.

I have immensely enjoyed serving the Laser Science community for the past year as the chair of DLS. I look forward to seeing all of you in Providence!

Robert W. Boyd

DEADLINES

October 2, 2000 DLS Ballot Return

October 15, 2000 DTL Requests for Spring 2001 Visits

March 6, 2001 Summer Undergraduate Research Grant Applications

March 15, 2001 Student Travel Grants for QELS 2001

April 1, 2001 APS Fellowship Nominations

INTERDISCIPLINARY LASER SCIENCE CONFERENCE ILS-XVI

The 16th Annual Interdisciplinary Laser Science Meeting (ILS-XVI) will be held in Providence, RI on October 22 - 26, 2000. The 2000 Meeting, which is colocated with the OSA Annual Meeting, will bring together a scientists across a broad range of disciplines to discuss new work in the rapidly moving field of laser science and applications to chemistry, biology and physics.

Also note the following events of special interest to DLS members:

- Annual DLS Business Meeting:
Wednesday, October 25th 5:15-7:00 pm
Convention Center Room 556A
- DLS Reception
Wednesday, October 25th, 7:00 pm
Westin Hotel
- DLS Banquet
Wednesday, October 25th, 7:30 pm
Westin Hotel

Further information about ILS-XVI can be obtained at http://www.osa.org/mtg_conf/ .

We look forward to seeing you in Providence.

Lewis Rothberg, University of Rochester, Conference Chair

Ian Walmsley, University of Rochester, Program Co-Chair

Louis DiMauro, Brookhaven National Laboratory, Program Co-Chair

1999 APS FELLOWS

In the previous edition of the newsletter we recognized the new APS Fellows who were nominated by the DLS: William Breckenridge, Michael Downer, John Hepburn, Mark Johnson, Wolfgang Schleich, George Stegeman, and Kent Wilson. In addition, these DLS members were also named as Fellows in 1999. Congratulations to all of our DLS colleagues who were honored this year!

John Brandenberger, Lawrence University

For stimulating incorporation of laser physics in undergraduate curricula, for advocacy of undergraduate research, and for creative leadership in building an exemplary undergraduate physics program.

Charles Brau, Vanderbilt University

For his contributions to the development of free-electron lasers, and his discovery of the rare-gas halide excimer lasers.

Daniel Heinzen, University of Texas, Austin

For outstanding and groundbreaking work on cold-atom photoassociation spectroscopy.

Wendell Hill, III, University of Maryland

For significant experimental contributions to our understanding of multiphoton dissociation and ionization of small molecules.

Richard Hughes, Los Alamos National Laboratory

For work in the application of fundamental quantum mechanical principles to practical problems, including quantum computation and quantum cryptography, and for the development of experimental techniques in this regard.

Yuan-Pern Lee, National Tsing-Hua University

For developing and applying novel spectroscopic techniques for characterizing radical species, particularly their kinetics and unstable structures.

Louis Orozco, SUNY Stony Brook

For vital contributions to measuring the antipositron mass, trapping and spectroscopy of Francium, and the quantum nature of the interactions of atoms and light.

Fujio Shimizu, University of Electro-Communications

For outstanding contribution to laser spectroscopy, laser cooling and atom optics.

Thad Walker, University of Wisconsin

For pioneering research in spin exchange, optical pumping, ultracold collisions, spin polarized beams and targets, laser cooling, and electron scattering.

Linda Young, Argonne National Laboratory

For precision measurements in atomic structure and the development of laser-driven polarized hydrogen and deuterium sources.

DISTINGUISHED TRAVELING LECTURER PROGRAM IN LASER SCIENCE

The Distinguished Traveling Lecturer (DTL) program provides funds to send outstanding scientists and communicators in the areas covered by DLS to visit predominantly undergraduate colleges and universities in order to convey the excitement of laser science to undergraduate students. Lecturers visit selected academic institutions for two days, during which time they give a public lecture open to the entire academic community and meet informally with students and faculty. They may also give guest lectures in classes related to Laser Science. Details about the program and the application procedure can be found at the DLS web site at http://www.physics.wm.edu/~cooke/dls/p_dtl.cfm **Applications for Spring 2001 are due October 15, 2000.**

The DTLs for the 2000-2001 Academic Year are:

- Lee W. Casperson, Portland State University, *Lasers and Optical Systems*
- Jim Kafka, Spectra Physics, *Laser Development*
- Wolfgang Ketterle, MIT, *Atom cooling and trapping*
- Mara Prentiss, Harvard University, *Atom Optics*
- Carlos Stroud, University of Rochester, *Wavepackets*

For more information about this program see the DLS web site or contact the chair of the DTL Committee, Rainer Grobe, by phone (309-438-5470) or email (grobe@phy.ilstu.edu).

UNDERGRADUATE SUMMER RESEARCH

The Division of Laser Science Undergraduate Summer Research Program provides support for students to conduct laser-related research in the summer between their junior and senior year. Preference will be given to DLS student members. The research may be performed at the student's home institution, or at any other U.S. undergraduate or graduate institution at which the student's faculty sponsor can provide close supervision. More information about this program can be found at http://www.physics.wm.edu/~cooke/dls/p_sres.cfm. The anticipated deadline for summer 2001 awards is March 6, 2001.

BYLAWS OF THE DIVISION OF LASER SCIENCE

(Draft May 29, 2000)

(In the following text "Society" shall signify the American Physical Society, "Council" and "Executive Board" shall signify the Council and the Executive Board of the Society, respectively, "Executive Officer" shall signify that Officer of the Society; and "Annual Meeting" shall signify the principal meeting held once a year by the Division of Laser Science.)

ARTICLE I NAME

This Division of the American Physical Society shall be called the Division of Laser Science.

ARTICLE II - OBJECTIVE

The objective of the Division shall be the advancement and diffusion of knowledge in the area of science related to the use of lasers in research, the application of lasers in technology, and the development and characterization of new laser systems. This will be accomplished by representing the American Physical Society on the Joint Council on Quantum Electronics (JCQE) and by helping to organize meetings sponsored by JCQE, by organizing an Annual Meeting of the Division, by sponsoring symposia on laser science topics at regular meetings of the Society, and its affiliate societies, and by other means approved by the Executive Committee of the Division. It is intended that the meetings of the Division shall involve both the dissemination of state-of-the-art subject matter in laser science for researchers in the field and tutorial overviews of topics in laser science for scientists and students in related fields.

ARTICLE III ENABLING CONSTITUTIONAL PROVISION

Article VIII of the Constitution of the Society, as said Article may be subsequently revised or amended, is hereby incorporated in these Bylaws by reference.

ARTICLE IV MEMBERSHIP

The members of the Division shall consist of members of the Society who have indicated in accordance with procedures established by Council their desire to join the Division and who retain membership from year to year by the payments of designated dues or by other method established by Council.

ARTICLE V EXECUTIVE COMMITTEE

1. Governance. The Division shall be governed by an Executive Committee, which shall have general charge of the affairs of the Division.

2. Composition. The Executive Committee shall consist of the Officers of the Division, the most recent Past Chair, the most recent Past Secretary-Treasurer for one year following his or her retirement as Secretary-Treasurer, the Division Councillor(s), and six Members-at-Large elected to staggered three-year terms. Division representatives to the JCQE and to the CLEO (Conference on Lasers and Electro-optics) steering committee who are not already Executive Committee members shall also serve as nonvoting *ex-officio* members of the Executive Committee. The Editor of the Division newsletter, if not already an Executive Committee member, will also serve as a non-voting *ex officio* member of the Executive Committee.

3. Executive Committee Meetings. The Executive Committee shall meet during the Annual Meeting of the Division and, in addition, shall meet or confer as necessary to carry out the business of the Division. The Chair of the Division shall preside over the Executive Committee Meetings. A majority of the voting members, including at least two Officers, shall constitute a quorum.

ARTICLE VI OFFICERS

1. Officers. The Officers of the Division shall be a Chair, a Chair-Elect, a Vice-Chair and a Secretary-Treasurer.

2. Duties of the Chair. The Chair shall preside at all meetings of the Executive Committee and Business Sessions of the Division at which his or her attendance is possible. The Chair shall perform such other functions as may be explicitly provided in the Bylaws.

3. Duties of the Chair-Elect. The Chair-Elect shall act in place of the Chair if the latter is unable to perform his or her duties. The Chair-Elect shall perform such other functions as may be explicitly provided in the Bylaws.

4. Duties of the Vice-Chair. The Vice-Chair shall act in place of the Chair-Elect if the latter is unable to perform his or her duties. The Vice-Chair shall perform such other functions as may be explicitly provided in the Bylaws

5. Duties of the Secretary-Treasurer. The Secretary-Treasurer shall maintain the records of the Division including minutes of Executive Comm

6. Committee meetings and Business Sessions, Division activities, and membership lists. The Secretary-Treasurer shall notify the Executive Committee of matters requiring the decision of said Committee and shall prepare the agenda of Executive Committee meetings and Business Sessions. The Secretary-Treasurer shall prepare minutes of Executive Committee meetings and Business Sessions and shall submit these minutes to each member of the Executive Committee and to the Executive Officer within four weeks after each meeting. Following elections, such minutes are to include the results of the election and a roster of the current Executive Committee membership.

The Secretary-Treasurer shall keep the Council and Executive Officer of the Society informed of the activities and needs of the Division.

The Secretary-Treasurer shall have responsibility for all funds in the custody of or placed at the disposal of the Division and shall authorize disbursements from such funds for expenses in a manner that is consistent with the general policies of the Society and the Division. Financial records shall be kept on an annual basis consistent with the fiscal policies of the Society. The approval of the Executive Committee shall be required for disbursements in excess of \$1000 per expenditure unless otherwise specifically delegated by the Executive Committee. The Secretary-Treasurer shall present a financial report at each meeting of the Executive Committee and at the annual Business Session of the Division.

7. Duties of the Division Councillor(s). The Division Councillor(s) shall serve as liaison between the Council of the Society and the Executive Committee of the Division. Following each Council meeting, the Division Councillor(s) shall report to the Chair and the Secretary-Treasurer regarding Council actions that affect the status and operations of the Division.

Reports shall be made to the entire Executive Committee during their regularly scheduled meetings.

ARTICLE VII ELECTION AND TENURE OF THE OFFICERS AND EXECUTIVE COMMITTEE MEMBERS

1. Qualifications. Officers, Division Councillor(s), and Members-at-Large of the Executive Committee must be members of the Division during their terms in office.

2. Ballot. The Vice-Chair, Secretary-Treasurer, Division Councillor(s), and Members-at-Large of the Executive Committee shall be elected by ballot as hereinafter provided.

3. Nomination and Election of the Vice-Chair, Secretary-Treasurer, and Executive Committee Members. The Nominating Committee shall nominate at least two candidates for the office of Vice-Chair each year, for Secretary-Treasurer during the final year of the term of the current Secretary-Treasurer, and for open positions of Members-at-Large of the Executive Committee each year. The Nominating Committee shall notify the Secretary-Treasurer of the results not later than twelve weeks before the Annual Meeting, except under extraordinary circumstances. All nominations shall include a letter from the candidate indicating a willingness to serve. An attempt shall be made to ensure a broad representation of the various sub-fields of laser science on the Executive Committee. Candidates for an office or a position on the Executive Committee may also be proposed by the membership of the Division. If as many as five percent of the total Division membership determined on 31 December of the year preceding the election suggests the same person for the same office not later than twelve weeks before the Annual Meeting, that person shall be deemed to have been nominated.

The Secretary-Treasurer shall poll the Division membership by ballot, stating a closing date at least three weeks prior to the Annual Meeting. Ballots shall be returned to and counted by the Secretary-Treasurer or his or her designate. Election shall be decided by a plurality of those voting. If there is a tie, the Executive Committee shall decide the election, with the Chair voting only in the case of a tie among the other Executive Committee members. The Secretary-Treasurer shall communicate the results of the election to the Chair at least two weeks prior to the Annual Meeting and shall publish the results in a manner designated for official announcements.

4. Nomination and Election of a Division Councillor. During the final year of a term of a Division Councillor, the Secretary-Treasurer shall determine from the Executive Officer if the terminating Division Councillor position is to continue. Such determination will be made by the Executive Officer based on Division membership according to rules specified in the Constitution and Bylaws. If the position is to continue or whenever the Executive Officer informs the Division that a new Division Councillor is to be elected, the Executive Committee shall nominate at least two candidates for each open position. The Secretary-Treasurer shall inform the Division members of the nominations and shall invite these members to suggest additional candidates. If as many as five percent of the total Division membership determined on 31 December of the year preceding the election suggests the same person, that person shall be deemed to have been nominated. The Secretary-Treasurer shall poll the division by ballot,

stating a closing date at least three weeks before 1 September. Ballots shall be returned to and counted by the Secretary-Treasurer or his or her designate. Election shall be by a plurality of those voting. If there is a tie, the Executive Committee shall decide the winner, with the Chair voting only in the case of a tie among the other Executive Committee members. The Secretary-Treasurer shall communicate the results of the election to the Chair and the Executive Secretary before 1 September of the year prior to that in which the new officer assumes office and shall publish the result in a manner designated for official announcements.

5. Official Year. The official year shall extend from the close of one Annual Meeting to the close of the next Annual Meeting.

6. Vice-Chair, Chair-Elect, and Chair. The member elected as Vice-Chair shall serve in that office for one year, then for one year as Chair-Elect, then for one year as Chair, and then for one year on the executive committee as Past-Chair. The Chair shall not be eligible for the office of Vice-Chair in the year following his or her term of office.

7. Terms of Office. The terms of office of the Officers and Members-at-Large of the Executive Committee shall begin at the close of the Annual Meeting of the Division following their election. The Secretary-Treasurer shall serve for a term of three years and may not serve more than two consecutive terms. Members-at-Large of the Executive Committee shall not be eligible for election to more than two consecutive terms. The tenure of a Member-at-Large shall terminate in the event of his or her assumption of a post as an elected Officer of the Division, and the unexpired portion of his or her term shall be filled as hereinafter provided for a vacancy.

8. Vacancies in Offices. If a vacancy occurs in the office of Chair, the Chair-Elect shall succeed and complete the term and shall serve as Chair also in the following year. The Vice-Chair shall serve simultaneously as Chair-Elect during the remainder of the term and shall continue to serve as Chair-Elect in the following term.

If a vacancy occurs in the office of Chair-Elect otherwise than through advancement to Chair, the Vice-Chair shall become Chair-Elect. In this case, and also if the office of Vice-Chair becomes vacant for other reasons, the office of Vice-Chair shall remain vacant for the remainder of the term. In the next scheduled election, candidates for both Chair-Elect and Vice-Chair shall be nominated.

If vacancies occur in the offices of both the Chair and the Chair-Elect, the Vice-Chair shall become Chair and shall complete the term. In this case, the Executive Committee shall determine whether there is a need to call a special election to fill the offices of Chair-Elect and Vice-Chair. The members so elected shall take office immediately upon election and shall also serve in those offices in the following year. If a special election is not held, candidates for both Chair-Elect and Vice-Chair shall be nominated at the next scheduled election.

Vacancies in any other elected office shall be filled (or left unfilled) by the Executive Committee until such time as the vacancy can be filled by regular election procedures.

ARTICLE VIII APPOINTED COMMITTEES

1. Nominating Committee. The Nominating Committee shall consist of three members, two appointed by the Chair, with the advice of the Executive Committee, to one-year terms and one member appointed by the Council for a one-year term. The Chair shall ascertain through the Executive Officer the identity of this member. The Chair shall appoint the Chair of the Nominating Committee from among the members. The Nominating Committee shall prepare a slate of candidates for the positions of Vice-Chair, Secretary-Treasurer, and Members-at-Large of the Executive Committee according to Article VII3 of these Bylaws. The Nominating Committee shall advise the Chair on suitable candidates for Society committees, including relevant Society Prize and Award committees, and on candidates for Society offices. The Nominating Committee shall perform such other duties as described in the Bylaws.

2. Program Committee. The Program Committee shall be chaired by the Chair-Elect. In this capacity, the Chair-Elect shall act as the chief scientific officer of the Division, and shall have, with the advice of the Program Committee, final authority on and be responsible for the execution of all meetings and symposia sponsored or co-sponsored by the Division. All decisions and actions of the Program Committee and of the Chair-Elect acting as its Chair shall be subject to the approval of the Executive Committee. Members of the Program Committee shall include the Annual Meeting Conference Chairs, the Annual Meeting Program Committees, all other chairs of conferences sponsored by the Division, and all organizers of symposia sponsored by the Division at meetings of the Society or its subunits. The Chair-Elect shall be an *ex officio* member of the program, conference, or organizing committees of the Division. Other members of the Program Committee may be appointed annually by the Chair of the Division to one-year terms, with the advice of the Executive Committee. Members of this committee may be re-appointed without restriction.

3. Fellowship Committee. The Fellowship Committee shall consist of the Vice Chair and four members appointed by the Chair to staggered two year terms. The Vice Chair shall chair the Fellowship Committee. The Fellowship Committee shall promote the nomination of candidates for Fellowship, shall review the qualifications of candidates for Fellowship and shall report its recommendations to the Executive Committee of the Division and to the Executive Officer of the Society.

4. Terms of Office of Appointed Committee Members. The terms of committee members appointed or recommended by an incoming Chair shall commence at the beginning of the year in which he or she assumes office.

5. Ad Hoc Committees. The Chair shall appoint other ad hoc committees as necessary, which shall serve only during his or her term as Chair.

ARTICLE IX MEETINGS

1. Annual Meeting. One meeting of the Division, to be known as the Annual Meeting, shall be held at such time and place as shall be ordered by the Executive Committee, subject to approval by the Executive Board. Whenever it shall be feasible and not to the disadvantage of the

members of the Division, the Executive Committee may order this or any other meeting to be held conjointly with a Meeting of the Society or of another society, conference, or group, so long as such joint meeting does not conflict importantly with the schedule of Meetings of the Society as determined by the Executive Board. The registration fee for the Annual Meeting, when not held jointly with a Meeting of the Society, shall be fixed after consultation with the Executive Officer. Non-members of the Society shall pay a surcharge to be set each year by the Executive Board.

2. Annual Business Session. Each year the Division shall hold a Business Session which shall be a session of the Annual Meeting. This Business Session shall be devoted exclusively to the reports of officers and committees, election results, and the transaction of business affairs. No scientific program of the Division shall be presented simultaneously with the Business Session. A majority of the members present at the Business Session shall be sufficient for the approval of actions. The Secretary-Treasurer shall notify the Division members of the agenda of the Business Session no later than three weeks prior to the meeting.

3. Other Meetings. Meetings of the Division, other than the Annual Meeting may be initiated by the Executive Committee or by petition of twenty percent of the members of the Division, subject to approval by the Executive Board. Special conferences may be sponsored in whole or in part by the Division, subject to the rules and regulations specified in the Society Constitution and Bylaws.

4. Papers at Meetings. Programs of meetings of the Division may provide for the inclusion of both invited and contributed papers. When a meeting of the Division is held in conjunction with a meeting of the Society, the rules of the Society shall apply to submitted papers. When a meeting of the Division is not held in conjunction with a meeting of the Society, the Executive Committee shall prescribe the subject and character of the meeting, which may include limitations on the subject matter of submitted papers. The Secretary-Treasurer shall fix the deadline date for receipt of titles and abstracts in consultation with the Executive Officer and shall designate the place to which they should be sent. The amount of time to allowed for the presentation of a paper at the Annual Meeting shall be determined by the Program Committee, except as otherwise directed by the Executive Committee. These allotments of time shall be consistent with the Constitution and Bylaws of the Society and with regulations of Council.

ARTICLE X DUES

Dues for maintenance of membership in the Division shall be established by Council.

ARTICLE XI NEWSLETTER

The newsletter of the Division shall be managed and edited by an Editor, who shall be appointed by the Chair, with the advice and consent of the Executive Committee. The Editor shall oversee the preparation and distribution of the newsletter. There shall be at least two issues per year; the frequency and timing of these issues shall be determined by the Editor in consultation with the Secretary-Treasurer. The Executive Committee may direct the Secretary-

Treasurer to distribute complimentary copies of the newsletter to specified non-members of the Division.

ARTICLE XII OFFICIAL ANNOUNCEMENTS

Official announcements shall be made in the APS News and in such other publications as the Executive Committee may direct.

ARTICLE XIII PROCEDURE OF AMENDMENT OF BYLAWS

Proposal of an Amendment to these Bylaws may be made by the Council, by the Executive Committee, or by a petition to the Chair signed by not fewer than ten percent of the members of the Division. If the proposed amendment originates within the Division, it must be approved by Council before further action can be taken. Following Council approval, the Secretary-Treasurer shall distribute copies of the proposed Amendment to all members of the Division not less than three weeks before the Annual Meeting and opportunity shall be given for discussion during the Business Session. Without that consent, the voting on the proposed Amendment shall be as follows: Not later than twelve weeks after said Annual Meeting the Secretary-Treasurer shall again distribute copies of the proposed Amendment, accompanied by ballot forms. Adoption of the Amendment shall require a two-thirds vote by those voting.

STUDENT TRAVEL GRANTS

The Division of Laser Science (DLS) is pleased to continue its program to support student travel to DLS-sponsored meetings. A limited number of grants for travel and living expenses, up to \$700, are available to graduate students who are DLS members and who co-author either an oral or poster paper at the ILS-XVI meeting, or at the QELS conference. Complete details concerning the application process can be found at:

http://www.physics.wm.edu/~cooke/dls/p_strav.cfm

Applications must be received by April 3, 2001 for 2001 QELS meeting. Applications should be submitted to the current Secretary/Treasurer of the DLS, Prof. Richard R. Freeman

CANDIDATES FOR DLS OFFICES

VICE CHAIR

Wendell T. Hill, III, Professor, Institute for Physical Science and Technology and Director of the Laboratory for Atomic, Molecular and Optical Science and Engineering, University of Maryland, College Park (faculty since 1982); Visiting position with Instituto Venezolano de Investigaciones (Venezuela) (1983), Universiti de Paris, Orsay France (1989) and JILA, University of Colorado (1992-1993); NRC Postdoc, NIST (formerly NBS), Gaithersburg (1980-1982); Ph.D. in Physics, Stanford University, 1980, BA in Physics, University of California, Irvine, 1974.

Research Interests: Strong laser-field interactions with atoms and molecules, ultrafast atomic and molecular dynamics and coherent control of quantum states; laser interaction with cold atoms and laser manipulation of microparticles and cold atoms.

Professional Activities: Program Committees: QELS (1989, 1995); ILS/OSA (1994-1996); Chair, Laser Spectroscopy Subcommittee, QELS (1995); Spring APS Meeting (1997); Symposia Organizer: "Small Molecules in Intense Laser Fields," Spring Meeting of the APS (1989); "High Field Laser-Matter Physics: Molecules," OSA (1990); "Photoion and Photoelectron Imaging," OSA (1996); Gordon Conference Discussion Leader: Molecules in Intense Fields, Multiphoton Processes (1992); Atoms in Intense Fields, Atomic Physics (1995); Other Committees: CAMOS (1993-2001); Chair CAMOS (1996-1999); Chair, Optical Physics Technical Group, OSA (1994-1995); APS Committee on Minorities in Physics (1994-1996); DLS Executive Committee (1994-1997); CoChair, DLS/DAMOP Congressional Reception on AMO Science (1997); Max Born Award Committee, OSA (1997-1999); Chair, Max Born Award Committee, OSA (1997); DAMOP Best Thesis Committee, APS (1997-1999); Vice-Chair, FAMOS Update Committee, NAS/NRC (1999-2001)

Honors and Society Memberships: Honors: IBM Graduate Fellowship (1974-1975); National Science Foundation Presidential Young Investigator (1985-1990); Fellow of the American Physical Society; Memberships: American Physical Society; Optical Society of America; National Society of Black Physicists.

Candidate's Statement: The Division of Laser Science membership is a unique mix of researchers who focus on physics, chemistry, biology and engineering. This inter- and multidisciplinary division is home to a growing number of world-class scientists and engineers who employ lasers and optics in truly remarkable ways to investigate and control everything from individual atoms to collective phenomena. As a result, the division is in an enviable position of being able to claim some of the most exciting research of our time. This blessing is also a liability, however, as young and established investigators are finding stiffer competition for adequate funding as the number of proposals in laser science increases. Building on current programs within the division, we must continue to look for new opportunities and paradigms to showcase our members and their research with the intent to create additional opportunities for networking, funding and employment. To augment our efforts, we should also look for ways to couple our activities with those of other divisions and societies. Exploiting new opportunities will enable us to realize an even healthier environment for laser science and to attract the best young minds into the field.

Winthrop W. Smith, Professor of Physics and Member of the Institute of Materials Science, University of Connecticut, 1975-; Associate Prof., Univ. of Connecticut, 1969-1975; Instructor to Assistant Prof., Columbia University 1965-1969; NAS-NRC Postdoctoral Fellow, JILA, University of Colorado, 1963-1965; Ph.D. in Physics, MIT, 1963; BA in Physics, Amherst College, 1958.

Research Interests: Experimental AMO physics: optical emission and excited state lifetimes of atoms and ions; ion-atom, atom-atom and ion-molecule collisions; hyperfine structure;

accelerator-based spectroscopy, XUV and laser spectroscopy, laser cooling of ions, ion impact on surfaces, atom optics and atom interferometry.

Professional activities: Research participant, Oak Ridge National Laboratory, 1969-1975; Visiting Fellow, JILA, University of Colorado, 1975-1976; NAS-NRC Committee on Atomic and Molecular Science, 1976-1979; Chairman, Gordon Research Conf. on Atomic Physics, 1977; Summer research physicist, Lawrence Livermore National Laboratory, 1979; Research participant to Consultant, Los Alamos 1985-1990; Visiting scientist, Molecular Physics Laboratory, SRI, International and Visiting Scholar, Stanford University (sabbatical) 1982-1983; NSF Review Committee for Nuclear Science, 1982; APS DAMOP Executive Committee, 1980-83; Consultant, Brookhaven National Laboratory, 1982-1986; on leave as Program Officer, AMOP Physics, NSF (1983-1984); DAMOP Secretary-Treasurer, 1987-1990; Visiting Scientist at the Max Planck-Institut für Quantenoptik, Garching/Munich, Germany and Guest Prof. University of Aarhus (Denmark), 1990-1992; APS DLS Secretary-Treasurer 1996-1999; Visiting Professor, MIT, Physics/RLE (Pritchard group, sabbatical) 1997-1998; Member, Panel for Physics, NAS-NRC Board of Assessment of Programs for NIST 1997-1999.

Honors and Awards: Fellow, APS; Humboldt Foundation Senior U.S. Scientist Research Awardee (Germany), 1990-1992.

Candidate's Statement: The Division of Laser Science plays a pivotal bridging role within APS at this time in representing and promoting the laser science community. It unites and encourages interaction among researchers in AMO physics, chemical physics, and condensed-matter physics as well as materials science and photonics, to name just some of the main areas of interest. As such, part of the DLS mission is sponsor symposia and meetings that attempt to bridge the gaps between these research areas, and between the Divisions of APS that focus on them. It promotes constructive activities in collaboration with other optics-related organizations outside of APS as well, such as OSA, IEEE/LEOS, SPIE, and ACS. The solid financial base of DLS enables it to set an example within APS in encouraging students and young researchers through its Distinguished Traveling Lecturer Program for 4-year institutions, its support of summer research for undergraduates and its travel grants to help students to attend and present papers at conferences in the field. I would like to see these programs broadened and much better publicized and also to seek aggressively other creative ways to help well qualified young researchers seeking fulfilling careers in basic science and technology relating generally to lasers and optics. For three years, I had the opportunity and privilege to see and help with the inner workings of DLS, providing good preparation for stepping up to a leadership role if the community wishes it.

EXECUTIVE COMMITTEE

A. W. Castleman, Jr. Professor of Chemistry and Physics, Eberly Distinguished Chair in Science, and Evan Pugh Professor, The Pennsylvania State University; Ph.D., 1969, Polytechnic Inst. of Brooklyn, and B.Ch.E. 1957 Rensselaer Polytechnic Institute

Research Interests: Chemical Physics--Bridging the gas and condensed phases and unraveling the properties of matter of nanoscale dimensions through investigating atomic and molecular

clusters; specifically laser photophysics and femtosecond laser spectroscopy studies of cluster structure, reactivity and dynamics.

Other Scientific Activities: Member, Editorial Board of the *Journal of Atmospheric Chemistry*, (1982 - 1994); Member, Editorial Board of *Aerosol Science and Technology*, (1982 - 1986); Member, Editorial Board of *The Journal of Chemical Physics*, (1985 - 1987); Member at Large, Topical Group on Lasers, The American Physical Society, (1985 - 1987); Member, Editorial Board of *The Journal of Physical Chemistry*, (1985 - 1988); Member, Editorial Board of the D. Reidel Publishing Company monograph series *Understanding Chemical Reactivity*, (1986 - present); Member, Editorial Board of the *International Journal of Mass Spectrometry and Ion Processes*, (1987 - 1990); Coeditor and Member, Editorial Board of *Zeitschrift für Physik D*, (1987 - 1992); Senior Editor, *Journal of Physical Chemistry* (1988 - 1998); Technical Consultant, E.I. DuPont de Nemours and Company, Wilmington, Delaware, (1989 - present); Member, Editorial Board of the *Journal of Cluster Science*, (1990 - 1999); Member, Chemical Physics Editorial Advisory Board of *Research Trends*, American Physical Society National Awards Committee (Plyler Prize), (1991 - 1992); Member of Review Panel, Alexander Hollaender Distinguished Postdoctoral Fellowship Program Selection Committee, (1991); Consortium for Nanoscale Materials, Virginia Commonwealth University (1992 - present); Member, Advisory Editorial Board of *Advances in Chemical Physics*, (1993 - present); Member of the Division of Chemical Physics Nominating Committee, the American Physical Society, (1994 - 1995), (Vice Chair, 1994, Chairman, 1995); Member, Advisory Editorial Board of *Chemical Physics Letters*, (1995 - present); Editor-in-Chief, *Cluster Science Book Series/Springer Verlag Advisory Board* (1996 - present); Alternant Counselor Member of the Executive Committee of the Physical Division (1998 - present); Member, Editorial Advisory Board of the *Journal of Physical Chemistry*, (2000); Honors, positions, memberships: Member of the National Academy of Sciences, (1998); Fellow of the American Academy of Arts and Sciences, (1998); Fellow of the New York Academy of Sciences, (1998); Senior Scientist Award, Japanese Society for the Promotion of Science, (1983, 1985, 1997); Fulbright Senior Scholar Award, (1989); ACS Award for Creative Advances in Environmental Science and Technology, (1988); Doktors Honoris Causa, University of Innsbruck, Austria, (1987); U.S. Senior Scientist von Humboldt Award, (1986, 1987, 1998); Fellow of the American Association for the Advancement of Science, (1985); Fellow of the American Physical Society, (1985); Sherman Fairchild Distinguished Scholar, California Institute of Technology, (1977)

Daniel S. Chemla, Professor of Physics, University of California at Berkeley, Director of the Materials Science Division and Director of the Advanced Light Source, Lawrence Berkeley National Laboratory; AT&T Bell Laboratories (1981-1991, Head of the Quantum Physics and Electronic Research Dept., 1983-1991), Centre National d'Etudes des Télécommunications, Doctorat in Sciences, 1972, University of Paris, undergraduate education, l'Ecole Nationale Supérieure des Télécommunications, Paris, France.

Research Interests: Many-body processes and collective effects in semiconductor nanostructures and strongly correlated materials; detection and spectroscopy of single molecules and single molecular pairs, with applications to problems in biology.

Honors, positions, memberships: Member, National Academy of Sciences; Fellow, American Physical Society; Fellow, Optical Society of America; Fellow, Institute of Electrical and Electronic Engineers; co-recipient, 1988 R.W. Wood prize of the Optical Society of America; 1995 Quantum Electronics Award of the IEEE Laser and Electro-Optics Society; 1995 Humboldt Research Prize; 1998 Gordon Conferences Alexander M. Cruikshank Lecturer.

Wayne M. Itano, Physicist, National Institute of Standards and Technology, Boulder, CO. Ph.D. 1979, M.A. 1975, Harvard University; B.S. 1973, Yale University.

Research interests: Trapped ion optical cooling and spectroscopy with applications to frequency standards, quantum logic, strongly-coupled plasmas, and demonstrations of basic quantum mechanics. Other scientific activities: Secretary-Treasurer, Topical Group on Laser Science (TG/LS) (1990-93); Member, Fellowship Committee, TG/LS (1995-96); Secretary-Treasurer, Topical Group on Precision Measurement and Fundamental Constants (1998-2001); Member, Publications Committee, Division of Atomic, Molecular, and Optical Physics (1984-85); Member, OSA Publishing Technology Committee (1994-96); Member, OSA Optics Express Development Consortium (1997); Associate Editor, Optics Express, (1998--); Science and Technology Agency Fellow, Communications Research Laboratory, Tokyo (1990); Member, Program Committee, 1994 OSA Annual Meeting and 10th Interdisciplinary Laser Science Conference; Member, Program Committee, 1991 Conference on Quantum Electronics and Laser Science.

Honors, positions, memberships: Fellow, APS; NIST Stratton Award; Department of Commerce Gold Medal; National Research Council Postdoctoral Fellow (1979-1980); Member APS (DLS, DAMOP, TG/PMFC), OSA.

Duncan G. Steel, Professor of Physics and Electrical Engineering and Computer Science, Research Faculty, Biophysics Research Division, (1985-), The University of Michigan, Ann Arbor, MI 48109. Senior Research Physicist (1975-1985), Hughes Research Laboratories. Ph.D., Electrical and Nuclear Science, University of Michigan, 1976. A.B Physics, UNC-Chapel Hill, 1972.

Research Interests: Laser Spectroscopy studies of condensed matter nano-structures and biomolecules. Current research includes studies of quantum dots for nonlinear nano-optics and development of laser based methodologies for studies of protein folding and dynamics.

Other Scientific Activities: Chair, Joint Council on Quantum Electronics (1998-2000), Member CLEO Steering (1998-), Vice Chair, APS Frank Isakson Award Committee (1999, Chair in 2001). Member, Arthur L. Schawlow Prize Committee (1995-6).

Honors, positions, memberships: 1999 Guggenheim Scholar, The Peter S. Fuss Professor of Engineering, 1999. Fellow APS (1994). Fellow OSA (1992).

Henry van Driel, Professor of Physics, University of Toronto, Ph.D. 1975, B.Sc., 1970, University of Toronto.

Research interests: ultrafast and nonlinear optical phenomena in semiconductors; coherence control phenomena in solids; physics of lasers and ultrashort pulse parametric sources; photonic crystals.

Other scientific activities: Topical Editor, JOSA B, 1993-1999; Member Program Committees: IQEC 1986,1988; 1994, Subcommittee chair, 1996, Program co-chair, 1998; Member QELS Program Committee, 1989,1995,1997,1999, General co-chair, 2000; OSA annual mtg., 1993; International Council of Quantum Electronics, 1992-6; Commission on Quantum Electronics, International Union of Pure and Applied Physics, 1993- : vice-Chair, 1999-2002; Chair, Division of Optical Physics, Canadian Association of Physicists, 1992-93; Associate Director, Ontario Laser and Lightwave Research Center, 1988-94.

Honors, positions and memberships: J.S. Guggenheim Fellow (1986); Alexander Von Humboldt Senior Scientist Research Award (1991); Killam Fellow (1997-9), Fellow, Optical Society of America, 1989; Fellow, Royal Society of Canada, 1989; Postdoctoral fellow, University of Arizona, 1975-6. Visiting scientist: Harvard University, 1983; Max Planck Institut für Festkörperforschung, 1991-2; University of Amsterdam, 1999; member: APS, OSA, Canadian Association of Physicists, Royal Society of Canada.

CALENDAR

ILS-XVI, Annual Meeting of the DLS (collocated with **OSA 2000**), October 22-26, 2000, Providence, RI. http://www.osa.org/mtg_conf/

CLEO/QELS 2001, May 6-11, 2001, Baltimore, MD.

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