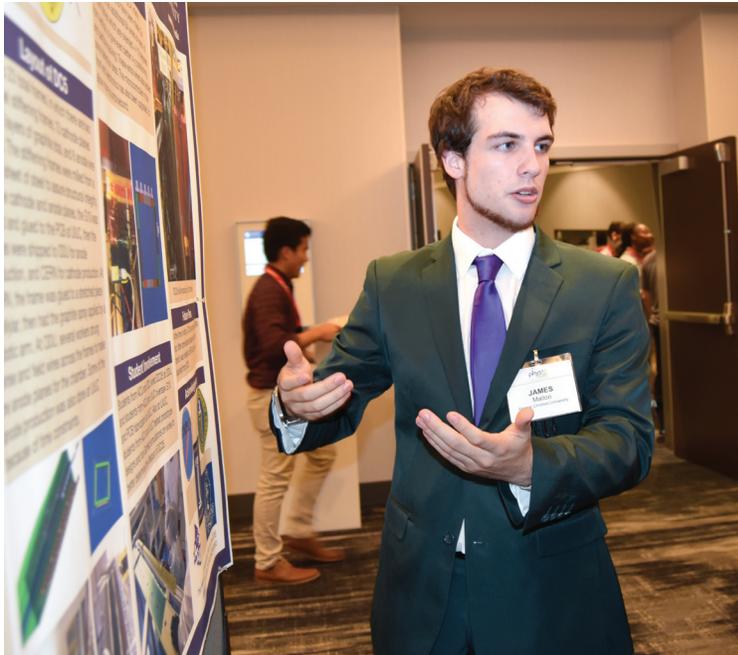




SIGMA PI SIGMA

The physics honor society



Honor Encouragement Fellowship Service



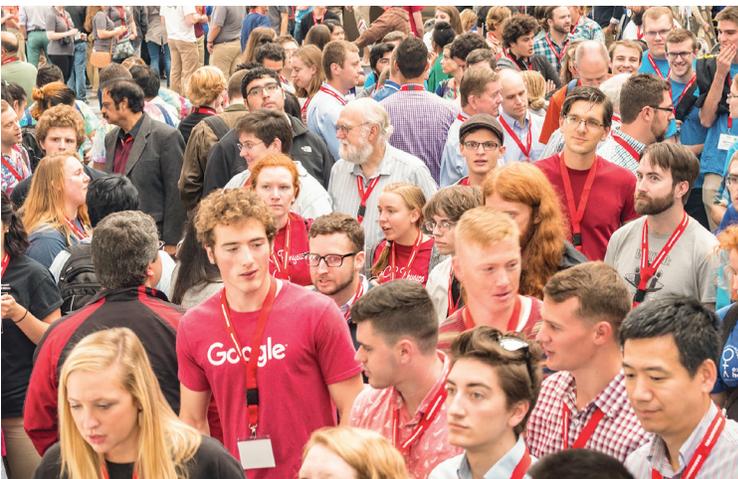
Wavelength-tunable thin mirrors prepared by new double-beam matrix assisted pulsed laser deposition (DB-MAPLE) method
Mentor, Presidential Professor Abdalla M. Darwish

Abstract
Matrix feasibility of producing functional polymer nano-composite films for light focusing beam pulsed laser microscope (PLD) technique. The existing pulsed laser modified to accommodate two laser beams of different wavelengths for the incident light and a rare earth inorganic deposit. Special provisions were made for cooling the in-line earth elements were fabricated by the proposed method with near-infrared fluorescence observation using atomic force microscopy, X-ray diffraction, optical thin film structure and the conversion fluorescence properties of the initial rare earth content of the deposition process of the materials with substantially enhanced a potentially used for making a wide variety of composite films.

Experimental Setup
Date: methacrylate in the MAPLE process and installed in the emission material is Cs Nd:YAG Q-switched fundamental with the 1064 nm laser intensity stabilized with the laser was not exceeding Experimental setup for measuring the decay time of fluorescence of upconversion material

Results
The surface morphology of the composite films and the surface roughness and the homogeneity of the composite films was evaluated using the AFM. The AFM images indicate that the surface roughness and the homogeneity of the composite films was evaluated using the AFM. The AFM images indicate that the surface roughness and the homogeneity of the composite films was evaluated using the AFM.

AIP
American Institute of Physics



Sigma Pi Sigma

THE MISSION OF SIGMA PI SIGMA

Sigma Pi Sigma exists to: HONOR outstanding scholarship in physics; ENCOURAGE interest in physics among all students; promote an attitude of SERVICE of its members toward their fellow students, colleagues, and the public; and provide a FELLOWSHIP of persons who have excelled in physics.

ELIGIBILITY & ELECTION

Sigma Pi Sigma receives into membership undergraduate and graduate students, faculty members, and accomplished scientists. Local chapters of Sigma Pi Sigma set standards prospective members must achieve to be eligible for induction. The minimal national standards specify that undergraduates must be in the upper one-third of their class in general scholarship, must have completed at least three semesters or five quarters of full-time college work, and have completed at least three semesters or five quarter courses in physics that can be credited toward a physics major.

Graduate students are eligible upon completing one year of study with satisfactory progress. Students who are not physics majors can be elected, provided that they meet the standards and have demonstrated an interest in physics.

Sigma Pi Sigma chapters are restricted to accredited colleges and universities that offer a physics major. A chapter can elect to membership qualified students and faculty members in nearby colleges that do not have a Sigma Pi Sigma chapter. Faculty members and physicists in industry and government laboratories, as well as secondary school physics teachers, can be elected by chapters on the basis of their professional record.

LIFETIME MEMBERSHIP

Induction into Sigma Pi Sigma is a lifetime membership, with one time dues \$54 paid at the time of their induction into Sigma Pi Sigma. This fee includes a one-year membership in the Society of Physics Students (SPS), or a one-year extension of membership for current SPS members.

The fee includes the cost of the official lapel pin, a certificate of membership, and a membership card. There are no annual dues to Sigma Pi Sigma or special assessment other than the original entrance fee. The entrance fee must be paid prior to the induction.

TO MEMBERS-ELECT

Congratulations on your effort and scholastic achievements which have resulted in your selection as a member-elect of the physics honor society, and on your invitation to join the society. This honor is extended only to those who have shown themselves to be outstanding in their field. It is our pleasure to extend this invitation to you to join Sigma Pi Sigma and welcome you into this community of scholars.

Membership Benefits



CHAPTER EVENTS

Members have the opportunity to attend local chapter events, as well as SPS events, as a way to share their experiences with younger members of the physics community. This allows students to meet new people, network, and keep up on the latest trends in physics.

AWARDS PROGRAMS

Voluntary donations from members fund annual award programs that support local chapter projects and recognize outstanding service. Contributions also support undergraduate physics students through scholarships, outreach awards, research awards, travel awards, and internship opportunities.

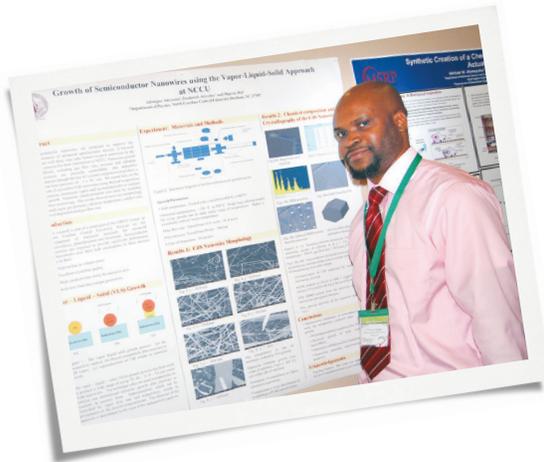
PHYSCON

From its beginning, the society's leaders envisioned regular gatherings. The first Sigma Pi Sigma Congress was held in 1928 at Davidson College, NC. Now known as "Physcon," these gatherings bring together 1,000s of individuals who are passionate about physics.

These meetings allow members:

- Hear plenary talks and participate in workshops led by luminaries in the field of physics.
- Connect as members of the physics community, and share their insight, experience, wisdom, and life experiences.
- Provide feedback, advice and recommendations that help set priorities for the society.
- Build recognition of Sigma Pi Sigma as a physics alumni association.

Membership Benefits

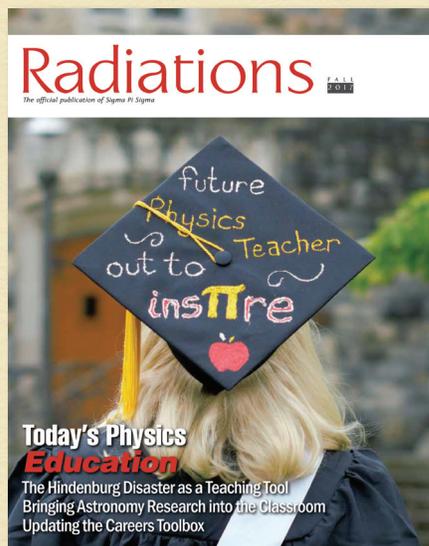


ONLINE COMMUNITIES

Members can engage with each other via our Facebook and LinkedIn groups, and participate in *Adopt-a-Physicist*, an online forum that connects high school students with physics graduates. They can also opt to receive notice of special events and opportunities through quarterly emails from the Director.

FEDERAL BENEFITS

The U.S. Civil Service Commission has stated that membership in a recognized national honor society (like Sigma Pi Sigma) meets one of the requirements for entrance at the GS-7 level in numerous professional and technical occupations in the Federal service.



RADIATIONS MAGAZINE

Radiations magazine is mailed to members twice annually and is available online. It features relevant scientific articles, "Hidden Physicist" profiles highlighting the many different careers an education in physics can provide, and updates on notable achievement by Sigma Pi Sigma members and chapters.

Honorary Members

The highest class of membership in Sigma Pi Sigma is that of Honorary Member. Distinguished physicists and scientists from related fields who have made valuable contributions to physics at the national level are eligible for this honor. Local chapters and society leaders may nominate such individuals, but election is only by the National Council. A sampling of notable scientists who have been recognized with this honor includes:



Robert Ballard
John Bardeen
Jocelyn Bell Burnell
D. Allan Bromley
Mildred Dresselhaus
Freeman Dyson
S. James Gates, Jr.

Dan Green
John Grunsfeld
John Johnson
Paul E. Klopsteg
Edwin H. Land
Leon M. Lederman
Alan P. Lightman

John C. Mather
John H. Marburger
Linus C. Pauling
Melba N. Phillips
Norman Ramsey
Mercedes Richards
Vera Rubin

David Saltzberg
Worth Seagondollar
Emilio Gino Segrè
James Van Allen
Carl Wieman
Marsh W. White
Clarence Zener



History



Undergraduate founders of Sigma Pi Sigma.

Top row: R.H. People, W. K. McCain, M. C. Dew.

Bottom Row: R. M. Brice, J. K. Price.

Faculty Founders (not shown) J. M. Douglas,
W. W. Wood, L. M. Currie.

(Picture taken from the 1922 Quips and Cranks,
Davidson College Annual.)

Sigma Pi Sigma was founded as a local honor organization at Davidson College, NC, on December 11, 1921. The local society was so successful that a movement for nationalization was started in 1925, resulting in over 170 chapters by 1968. On April 22, 1968, Sigma Pi Sigma joined with the American Institute of Physics (AIP) student sections to form the Society of Physics Students (SPS). Sigma Pi Sigma continues to operate as a fully recognized honor society within SPS, a unique arrangement in student organizations. Sigma Pi Sigma induction fees pay a portion of the cost of operations of the society. The remainder comes from alumni contributions, SPS dues, and AIP.

Sigma Pi Sigma has chapters located at colleges and universities across the United States and beyond. Over 500 of the more than 800 SPS chapters now include an Sigma Pi Sigma chapter, with over 95,000 individuals inducted since its inception.

Sigma Pi Sigma is an organization of AIP and is a member of the Association of College Honor Societies (ACHS). It is also an affiliated society of Section B (Physics) of the American Association for the Advancement of Science (AAAS).



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