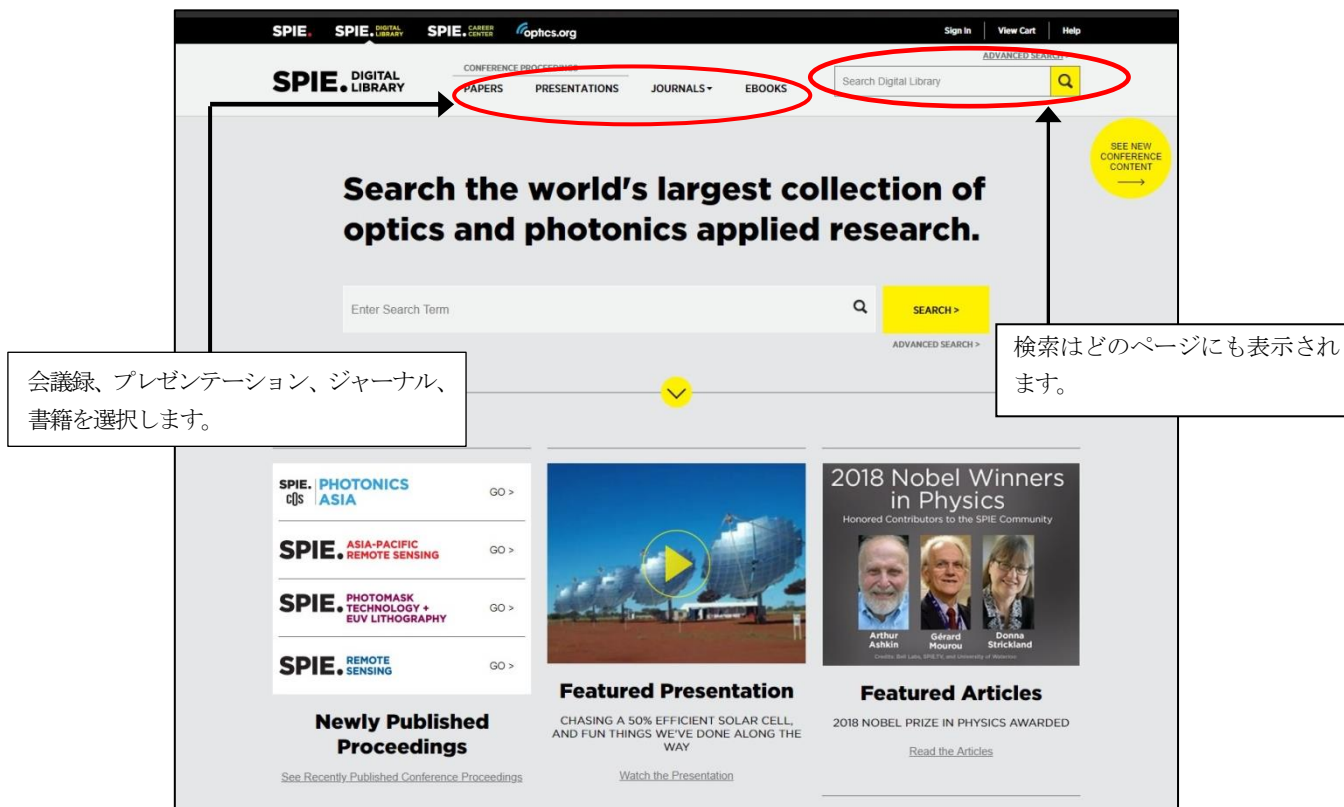


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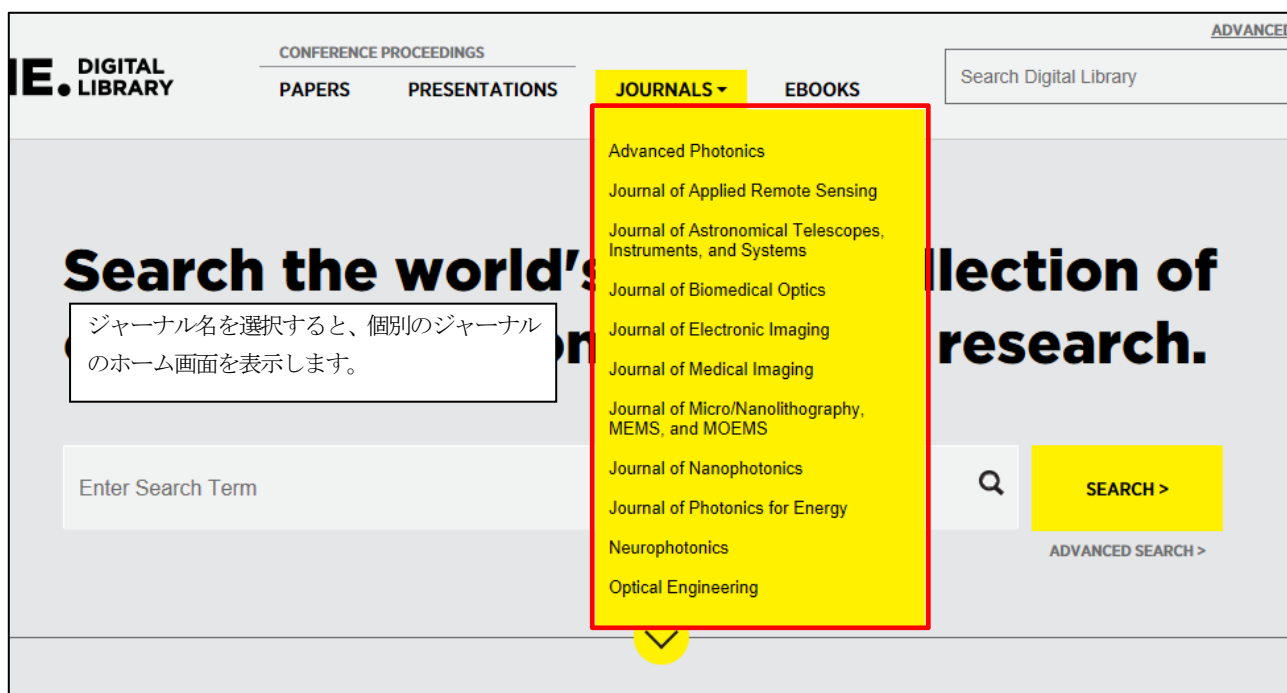
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ADVANCED PHOTONICS

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Eugene Arlt
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Fig. 5
Schematic illustration of a diffused-junction planar-geometry avalanche photodiode (APD) structure. The cross-sectional view shows the following layers from top to bottom: p-contact metallization, SiN_x passivation, p⁺-InP diffused region, i-InP cap, multiplication region, n-InP charge, n-InGaAsP grading, i-InGaAs absorption, n⁺-InP buffer, and n⁺-InP substrate. The bottom surface features an anti-reflection coating and n-contact metallization. An electric field (E) is applied across the device. The diagram illustrates the electric field profiles at the junctions, showing that the peak field intensity is lower in the peripheral region compared to the center of the device.

There are multiple detection events that can trigger a GMAPD receiver: the detection of a desired target photon, the detection of an undesired foreground clutter photon (such as backscatter from foliage), the

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For aspheric lens, the same principle can be applied with the difference that the local radius of curvature at the ring interface diameter is used in Eq. (1). To compute this local radius of curvature, we start with the aspheric surface description given as

(2)

$$z(r) = \frac{r^2}{R \left[1 + \sqrt{1 - (1+k) \frac{r^2}{R^2}} \right]} + \sum_{i=2}^n A_i r^{2i}$$

where $z(r)$ is the sagitta of the aspheric surface at distance r from the symmetry axis, R is the paraxial surface radius, k is the conic constant, and A_i is the aspheric coefficient.

The derivative of the aspheric function gives the slope of the tangent line to the aspheric surface at the radial distance r from the axis of symmetry. The local radius of curvature at the radial distance r from the symmetry axis to be used in the autocentering thread angle calculation is computed with Eq. (3)

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The derivative of the aspheric function gives the slope of the tangent line to the aspheric surface at the radial distance r from the axis of symmetry. The local radius of curvature at the radial distance r from the symmetry axis to be used in the autocentering thread angle calculation is computed with Eq. (3)

(3)

$$R_r = \frac{r}{\sin \left\{ \tan^{-1} \left[\frac{d}{dr} z(r) \right] \right\}}$$

The expanded form of the aspheric function [Eq. (2)] for the first seven aspheric terms is

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(3)

$$R_r = \frac{r}{\sin \left\{ \tan^{-1} \left[\frac{d}{dr} z(r) \right] \right\}}$$

The expanded form of the aspheric function [Eq. (2)] for the first seven aspheric terms is

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<ol style="list-style-type: none">1. Tang C. W., VanSlyke S. A., "Organic electroluminescent diodes," <i>Appl. Phys. Lett.</i>, 51 913–915 (1987). https://doi.org/10.1063/1.98799 APPLAB 0003-6951 Google Scholar2. Kido J., Kimura M., Nagai K., "Multilayered organic electroluminescent device," <i>Science</i> 267 1332–1334 (1995). https://doi.org/10.1126/science.1228216 Google Scholar3. Sun Y. et al., "Management of singlet and triplet energy levels in organic light-emitting diodes," <i>Nature</i>, 440 908–912 (2006). https://doi.org/10.1038/nature046924. Reineke S. et al., "White organic light-emitting diodes with fluorescent tube efficiency," <i>Nature</i> 459, 234–238 (2009). https://doi.org/10.1038/nature080125. Helander M. G. et al., "Chlorinated indium tin oxide electrodes with high work function for organic device compatibility," <i>Science</i>, 332 944–947 (2011). https://doi.org/10.1126/science.1204211 Google Scholar6. Han T.-H. et al., "Extremely efficient flexible organic light-emitting diodes with modified graphene anode," <i>Nat. Photonics</i>, 6 105–110 (2012). https://doi.org/10.1038/nphoton.2012.105 Google Scholar7. Sasabe H., Kido J., "Development of high performance OLEDs for general lighting," <i>J. Mater. Chem. C</i> 1, 1699–1707 (2013). https://doi.org/10.1039/c3tc01169a8. Sasabe H., Kido J., "Recent progress in phosphorescent organic light-emitting devices," <i>Eur. J. Org. Chem.</i> 2013, 7653–7663 (2013). https://doi.org/10.1002/ejoc.201300765			

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OPTICAL ENGINEERING
 VOL. 58 · NO. 1 | JANUARY 2019

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[Igor Piguievski](#)
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 Optical Engineering, 55(11), 111610 (2016). <https://doi.org/10.1117/1.OE.55.11.111610>

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2. Erik Kerstel, Arnaud Gardelein, Mathieu Baudois, "Quantum communication experiments in an urban environment", Optics Express 25(12), 13111-13120 (2017); doi:10.1140/epjqt/s40507-018-0070-7
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3. Michael T. Eismann, "Space-based laser communication: a review", Optics Express 25(12), 13121-13130 (2017); doi:10.1117/1.OE.56.12.13121
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4. Denis Naughton, "Supporting intersatellite laser communication: a review", Optics Express 25(12), 13131-13140 (2017); doi:10.1117/1.OE.56.12.13131
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5. Ondrej Čierny, Kerri Cahoy, "Optical Engineering", Optics Express 25(12), 13141-13150 (2017); doi:10.1117/1.OE.56.12.13141
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Laser Guide Star for Large Segmented-aperture Space Telescopes. I. Implications for Terrestrial Exoplanet Detection and Observatory Stability
 E. S. Douglas¹, J. R. Males², J. Clark¹, O. Guyon², J. Lumbres², W. Marlow¹, and K. L. Cahoy^{2,3}
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Abstract
 Precision wavefront control on future segmented-aperture space telescopes presents significant challenges, particularly in the context of high-contrast exoplanet direct imaging. We present a new wavefront control architecture that translates the ground-based artificial guide star concept to space with a laser source on board a second spacecraft, formation flying within the telescope's field of view. We describe the motivating problem of mirror segment motion and develop wavefront sensing requirements as a function of guide star magnitude and segment motion power spectrum. Several

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While it is inevitable that the near future will bring autonomous-navigation and ADAS systems that play important roles in automobile safety and navigation, despite its significant promises, the role that lidar sensors will play, among the suite of sensors, is yet to be determined. Existing automobile lidar sensors have yet to achieve the necessary range and resolution performance in inclement conditions, and significant improvements need to be made on lidar system size, weight, and power, as well as cost and reliability. The lack of suitable lidar instruments appreciably limits practical widespread use of lidar in a wider range of ADAS applications, and arguably has slowed the proliferation of level 3, and higher, automated driving systems.¹

The holy grail of a lidar sensor is a reliable low-cost all-weather camera that is capable of capturing temporally registered and calibrated, high dimensionality angle-angle-range point cloud data fully from around the vehicle (360 deg) using nonmechanical scanning—with a sufficiently fast update rate to avoid vehicle motion artifacts and provide sub-ms response time. Rather than capturing just a single range return, the ideal lidar sensor might be configured to capture the reflectivity, pulse shape, polarization, and other scene attributes encoded in a return pulse waveform, to increase the dynamic information available to the system efficiently as a function of the average laser power expended.

Lidar applications can be grouped into two primary distance zones of interest: "a medium distance" of ~ 20 to 40 m for side and angular warning zones, and a "long distance" of 150 to 400 m for the front and rear. Medium distance lidars generally require multilocation placement and, as they need to fit within the body panels of the

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capture higher resolution 3-D images with finer depth precision. The light travels toward whatever object is in its path, then reflects back toward the device. Since the speed of light is well known, lidar sensors can determine the range to a target by measuring the time it takes for the light to return to the origin. In this way, azimuth-elevation-range and range rate measurements may be captured. The use of reflected laser light also allows the reflectivity of objects to be measured—independent from ambient light—enabling lidar to provide long-distance high-fidelity range imaging in a wide range of conditions. Because lidar uses its own light source, it avoids the problems of video cameras, which do not operate well in dark conditions and are prone to high false-alarm rates (FARs) and saturation under brightly lit conditions.

Fig. 1
Lidar bounces light beams off of car, it works with radar and cam

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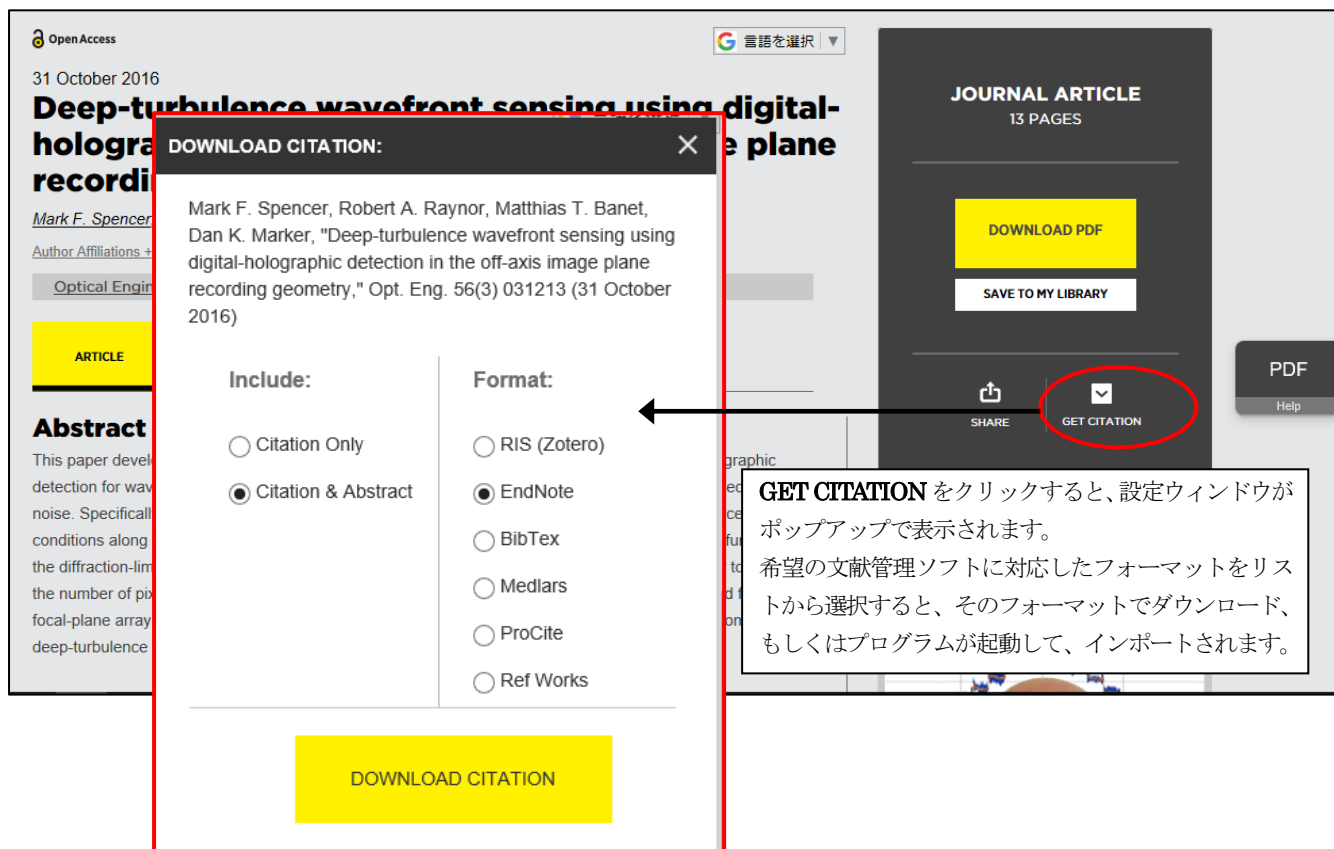
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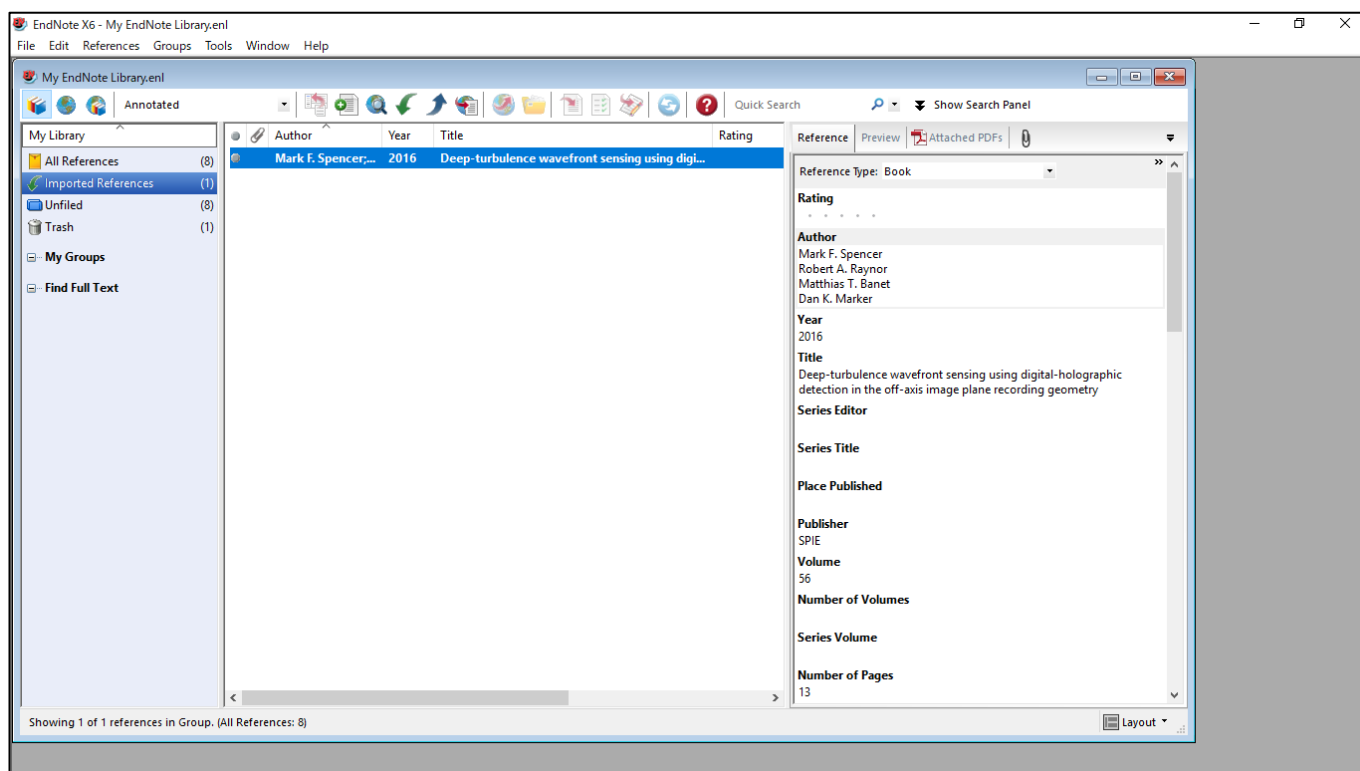
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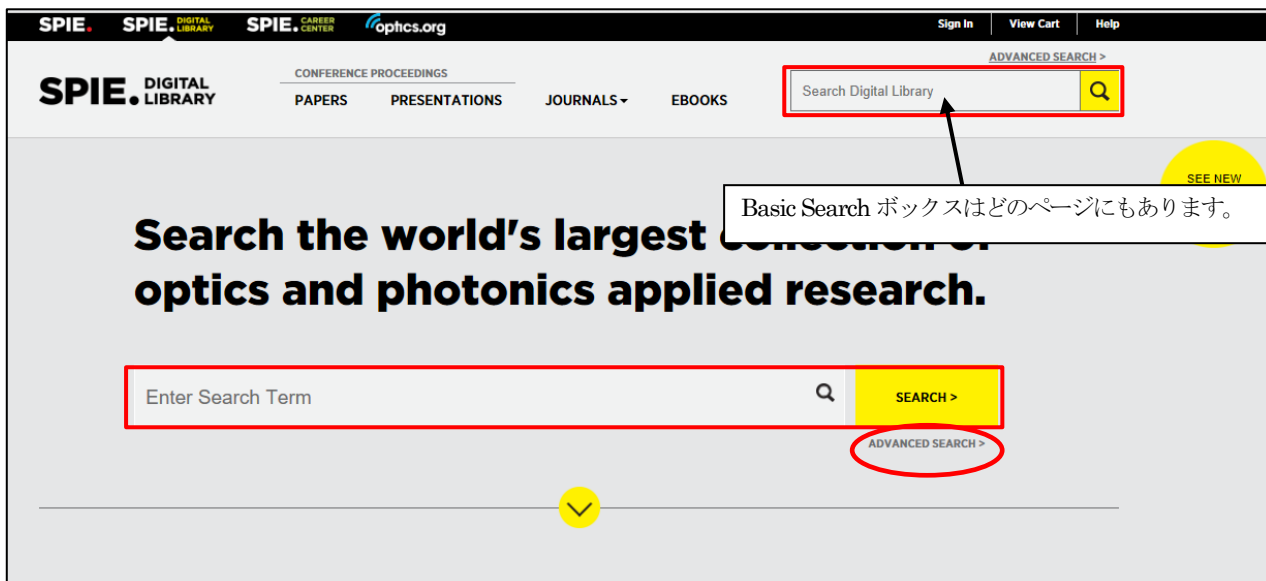
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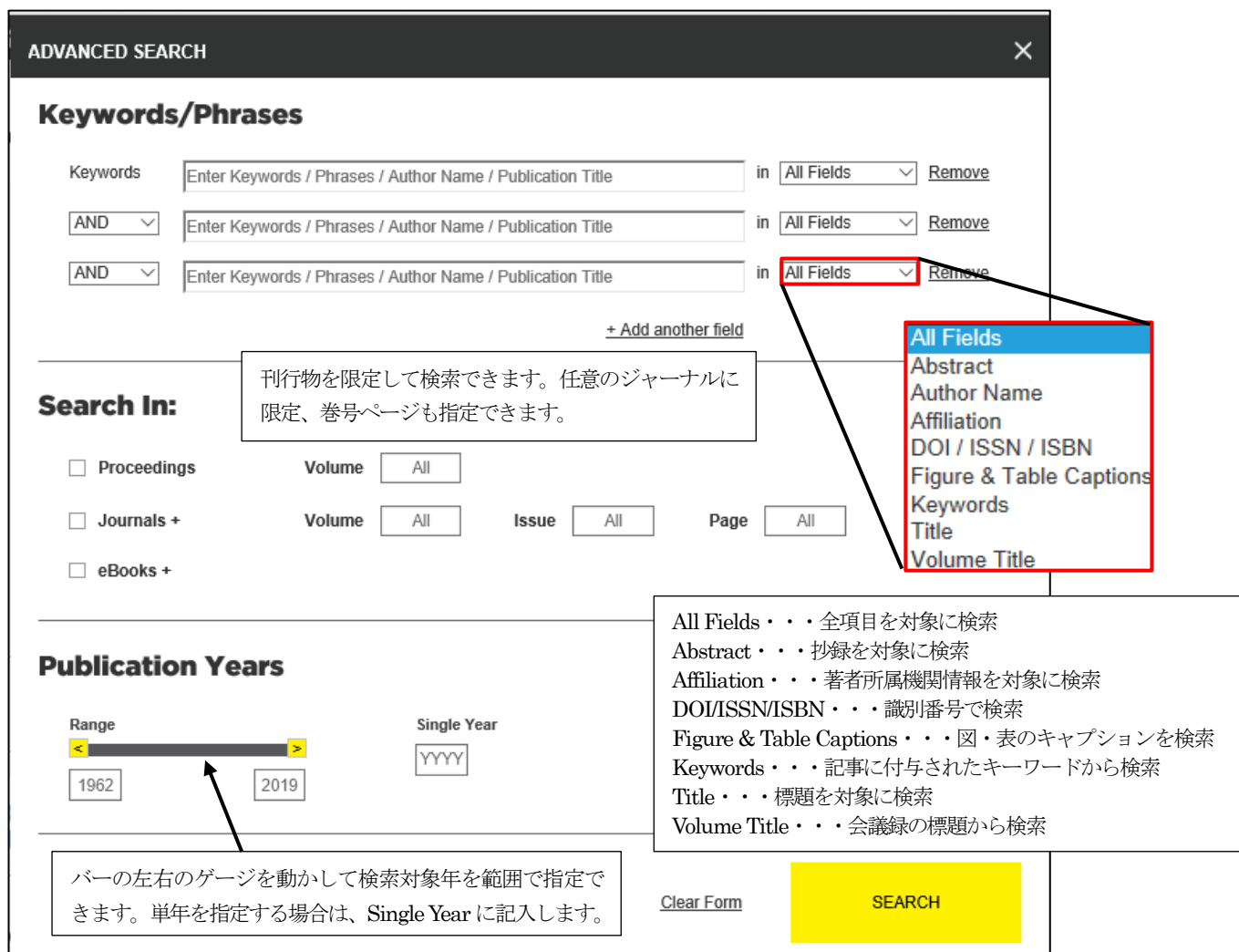
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検索ボックスは、どのページにも表示されます。



ホームページ

Advanced Search のリンクをクリックすると、Advanced Search 画面を表示します。Advanced Search では、検索項目を指定、特定の刊行物に限定、検索年度を限定するなど条件をつけた検索ができます。



Advanced Search 画面

★検索の基本

- ・大文字・小文字の区別はしません。全て小文字として認識されます。
- ・Basic Search でのキーワードの掛け合わせは、AND、OR、NOT が可能。
例) Diode AND light
TiO2 OR "titanium dioxide"
- ・複数形、派生語 (名詞形、動詞形、分詞形など) は、含めて検索します。
例: Image → images, imaged, imaging
- ・フレーズ (2 語以上の熟語) は両端をダブルクォーテーションで囲みます。
例: "blue light emitting diode"
- ・化合物名 (化学式) の検索
上付き文字・下付き文字の検索はそのまま入力。
例: Fe³⁺ → Fe3、Li₂CO₃ → Li2CO3
- ・イオンの価数表記は統一されていません。アラビア数字、ローマ数字が混在します。
例: 三価の鉄イオン → Fe³⁺、Fe^{III} (ローマ数字で検索する場合は、アルファベットでFeIII と入力)
- ・ギリシア語はそのまま検索できます。
例: "γ ray"
- ・記号 (+、-、%、#、単位など) は検索できません。
- ・著者名はフルネーム、もしくは姓から検索します。ウムラウト、アクサンなど特殊文字もそのまま入力します。
例: Jürgen Popp

検索を実行すると、検索結果を一覧表示します。左側の REFINE BY で任意のオプションで絞り込むことができます。

The screenshot shows a search results page for "raman spectroscopy" with 10,694 results. The left sidebar contains a "REFINE BY" section with several filters: "SEARCH WITHIN RESULTS", "PUBLICATION", "YEAR", "KEYWORDS", "ACCESS", "AUTHOR", and "AFFILIATION".

Annotations on the page explain the following features:

- SEARCH WITHIN RESULTS:** A search box with a magnifying glass icon allows for adding more search terms to narrow down results.
- PUBLICATION:** Checkboxes allow filtering by publication type, such as Conference Proceedings (9,566), Paper (9,385), Presentation (522), Journal Article (1,010), and eBook (116).
- YEAR:** A range slider and a "Single Year" input field allow filtering by publication year. The range is currently set from 1962 to 2019.
- KEYWORDS:** Checkboxes allow filtering by specific keywords, such as Raman spectroscopy (7,946), Spectroscopy (2,298), Raman scattering (2,169), Absorption (1,542), Crystals (1,510), Luminescence (1,474), Molecules (1,465), Sensors (1,258), Tissues (1,070), and Silicon (1,069).
- ACCESS:** A checkbox for "Open Access" (976) allows filtering for freely available articles.
- AUTHOR:** A plus sign indicates that author names can be used to filter results.
- AFFILIATION:** A plus sign indicates that affiliation names can be used to filter results.

検索結果一覧表示画面

4. 会議録へのアクセス

世界各地で開催される国際会議にて発表された 1 万 6,000 件以上の論文、プレゼンテーションの動画にアクセスすることができます。

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2010-NOW 2000-2009 1990-1999 1980-1989 1970-1979 1963-1969

2019 (10 Volumes)

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10910	Free-Space Laser Communications XXXI
10926	Quantum Sensing and Nano Electronics and Photonics XVI
10945	Broadband Access Communication Technologies XIII
10946	Metro and Data Center Optical Networks and Short-Reach Links II
10947	Next-Generation Optical Communication: Components, Sub-Systems, and Systems VIII
10964	Tenth International Conference on Information Optics and Photonics
10976	21st Czech-Polish-Slovak Optical Conference on Wave and Quantum Aspects of Contemporary Optics
11024	Asia-Pacific Conference on Fundamental Problems of Opto- and Microelectronics 2017

タイトルを選択すると、その会議録の目次を表示します。

Home > Proceedings > Volume 10511

PROCEEDINGS VOLUME 10511

SPIE LASE | 27 JANUARY - 1 FEBRUARY 2018

Solid State Lasers XXVII: Technology and Devices

Editor(s): [W. Andrew Clarkson](#), [Ramesh K. Shori](#)

SPIE. PHOTONICS WEST

SPIE LASE
27 January - 1 February 2018
San Francisco, California, United States

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IN THIS VOLUME

14 Sessions, 64 Papers, 40 Presentations

- [Front Matter: Volume 10511](#) (1)
- [Eye Safe and Mid-IR Lasers I](#) (4)
- [Eye Safe and Mid-IR Lasers II](#) (5)
- [Eye Safe and Mid-IR Lasers III](#) (5)
- [Disk Lasers](#) (5)
- [Pulsed Lasers I](#) (3)
- [Pulsed Lasers II](#) (2)
- [Pulsed Lasers III](#) (3)
- [UV-VIS Lasers](#) (5)
- [Ultrafast Lasers](#) (5)
- [Airborne and Space Qualified Lasers](#) (6)
- [Novel Laser Concepts](#) (6)
- [Laser Material and Characterization](#) (6)
- [Poster Session](#) (22)

FRONT MATTER: VOLUME 10511

[Front Matter: Volume 10511](#) [Open Access](#)

プレゼンテーションの動画がある記事には Presentation + Paper のアイコンが表示されます。

EYE SAFE AND MID-IR LASERS I

Efficient 2- μ m Tm:YAP Q-switched and CW lasers Presentation + Paper

A. D. Hays; Brian Cole; Vernon King; Lew Goldberg

Proc. SPIE 10511, Efficient 2- μ m Tm:YAP Q-switched and CW lasers, 1051102 (15 February 2018); doi: 10.1117/12.2289996

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2-micron lasing in Tm:Lu₂O₃ ceramic: initial operation Presentation + Paper

John Vetrovec; David M. Filgas; Carey A. Smith; Drew A. Copeland; Amardeep S. Litt; Eldridge Briscoe; Ernestina Schirmer

Proc. SPIE 10511, 2-micron lasing in Tm:Lu₂O₃ ceramic: initial operation, 1051103 (19 March 2018); doi: 10.1117/12.2291380

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Simulation of energy buildups in solid-state regenerative amplifiers for 2- μ m emitting lasers Presentation + Paper

Ramon Springer; Ilya Alexeev; Johannes Heberle; Christoph Pflaum

Proc. SPIE 10511, Simulation of energy buildups in solid-state regenerative amplifiers for 2- μ m emitting lasers, 1051106 (15 February 2018); doi: 10.1117/12.2287769

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2.097 μ Cth:YAG flashlamp pumped high energy high efficiency laser operation (patent pending) Presentation + Paper

Dan Bar-Joseph

Proc. SPIE 10511, 2.097 μ Cth:YAG flashlamp pumped high energy high efficiency laser operation (patent pending), 1051107 (15 February 2018); doi: 10.1117/12.2281504

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Presentation + Paper
言語を選択

26 February 2018
Home > Proceedings > Volume 10512 > Article

High brightness photonic lantern kW-class amplifier

Juan Montoya, Chris Hwang, Chris Aleshire, Patricia Reed, Dale Martz, Mike Riley, Michael Trainor, Catherine Bellej, Scot Shaw, T. Y. Fan, Dan Ripin

Author Affiliations +

Proceedings Volume 10512, Fiber Lasers XV: Technology and Systems, 1051202 (2018)
<https://doi.org/10.1117/12.2290014>
 Event: SPIE LASE, 2018, San Francisco, California, United States

ARTICLE
SECTIONS
FIGURES & TABLES
REFERENCES
CITED BY

Abstract

Pump-limited kW-class operation in a multimode fiber amplifier using adaptive mode control was achieved. A photonic lantern front end was used to inject an arbitrary superposition of modes on the input to a kW-class fiber amplifier to achieve a nearly diffraction-limited output. We report on the adaptive spatial mode control architecture which allows for compensating transverse-mode disturbances at high power. We also describe the advantages of adaptive spatial mode control for optical phased array systems. In particular, we show that the additional degrees of freedom allow for broader steering and improved atmospheric turbulence compensation relative to piston-only optical phased arrays.

Conference Presentation

DOE and Photonic Lantern: N-Port Combiners (Example: 3-Port)

LINCOLN LABORATORY
www.llnwd.com

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1.INTRODUCTION

Fiber power scaling has been limited by dynamic-mode disturbances [1]. Increasing the fiber mode area is an effective means to suppress nonlinearities. However, as the mode area is increased, the introduction of higher-order modes is inevitable. In this paper, we describe a technique for transverse-mode control.

KEYWORDS

Control systems

PROCEEDINGS

6 PAGES + PRESENTATION

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CONFERENCE NAME

- Photonics West (5,244)
- Optics + Photonics (4,420)
- BIOS (2,924)
- Optical Engineering + Applications (2,081)
- Defense + Commercial Sensing (1,756)
- NanoScience + Engineering (1,733)
- OPTO (1,536)

Plenaries & Keynotes

26 November 2018

Trends Observed in Ten Years of the BDS Thin Film Laser Damage Competition (Conference Presentation)

Christopher Stolz, et al.

28 November 2018

Test Methods for Laser-Induced Damage Threshold of Medical Laser Delivery and Applications Systems (Conference Presentation)

Hans-Peter Bortien

21 November 2018

Silicon Photonics: Bigger is Better

Andrew Rickman

21 November 2018

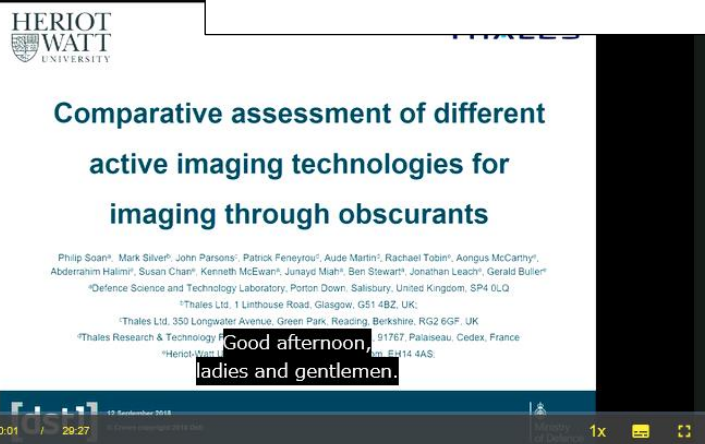
Neurophotonics strategies for observing and controlling neural circuits

Edward Boyden

PRESENTATIONS BY TECHNOLOGY

Astronomy (1311)	Nanotechnology (2851)
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Comparative assessment of different active imaging technologies for imaging through obscurants

Philip Soan^a, Mark Silver^b, John Parsons^c, Patrick Feneyrou^d, Aude Martin^e, Rachael Tobin^f, Aongus McCarthy^g, Abderrahim Halimi^h, Susan Chanⁱ, Kenneth McEwan^j, Junayd Miah^k, Ben Stewart^l, Jonathan Leach^m, Gerald Bullerⁿ

^aDefence Science and Technology Laboratory, Porton Down, Salisbury, United Kingdom, SP4 0LQ

^bThales Ltd, 1 Linthouse Road, Glasgow, G51 4BZ, UK;

^cThales Ltd, 350 Longwater Avenue, Green Park, Reading, Berkshire, RG2 6GF, UK

^dThales Research & Technology, 91767, Palaiseau, Cedex, France

^eHeriot Watt University, Edinburgh, UK

Comparative assessment of different active imaging technologies for imaging through obscurants

Authors: Philip Soan et al.

Publication Date: 6 December 2018

4 Presentation + Paper

PROCEEDINGS DETAILS

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From Event: SPIE Security + Defence, 2018

Abstract

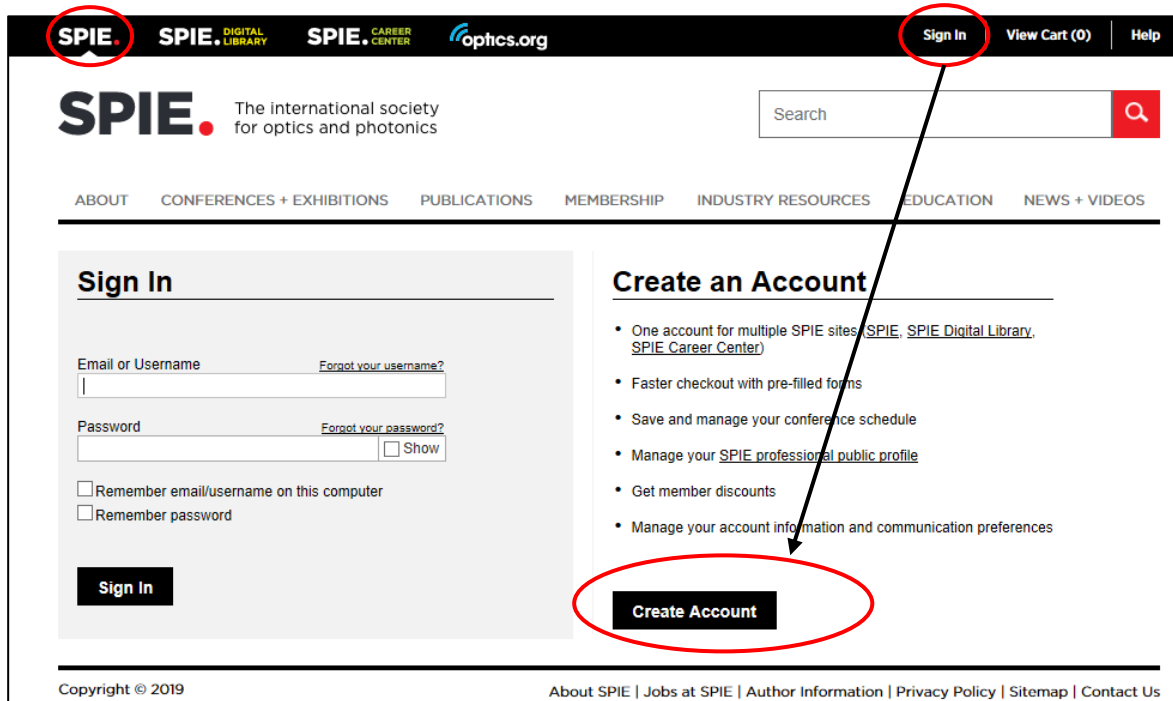
Natural and man-made obscurants like fog, cloud, smoke and dust are an impediment to the conduct of military operations, preventing effective pilotage, denying the ability to carry out surveillance and

5. ユーザー登録 (My Account)

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SPIE 学会ホーム Sign In / Create an Account の画面

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*Last/Family Name: [Text Field]

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*City: [Text Field]

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*State/Province: Select

*Zip/Postal Code: [Text Field]

Instructions:

自身の情報を記入します。赤の*の項目は必須項目です。それ以外は空欄で構いません。ユーザー名は、アルファベット、記号・数字を含んで、5～20文字で設定します。パスワードは、アルファベット、記号・数字を含んで6文字以上で設定します。

住所情報を入力します。記入後、NEXT ボタンをクリック。

Next をクリックすると、Preferences & Policies の設定画面になります。各項目の選択項目を選んで、CREATE ACCOUNT ボタンをクリックします。しばらくして確認のメールが登録のメールアドレスに送信されます。

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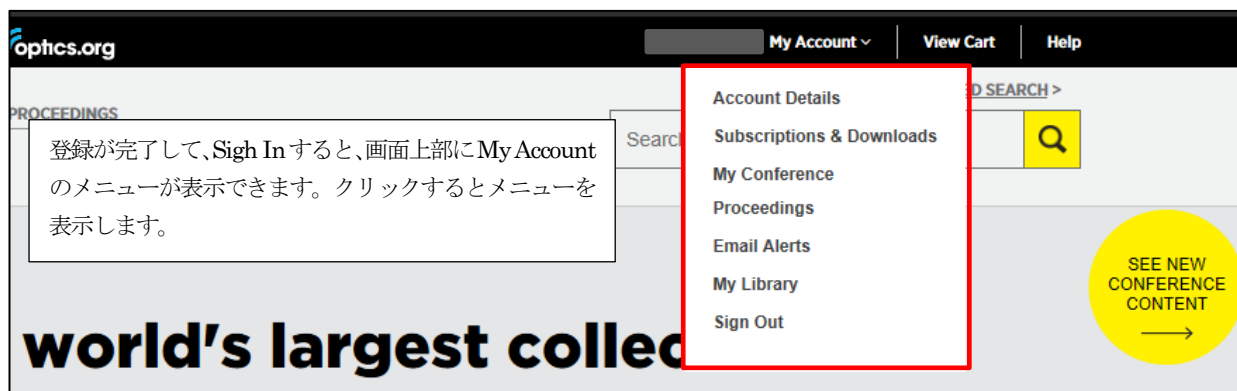
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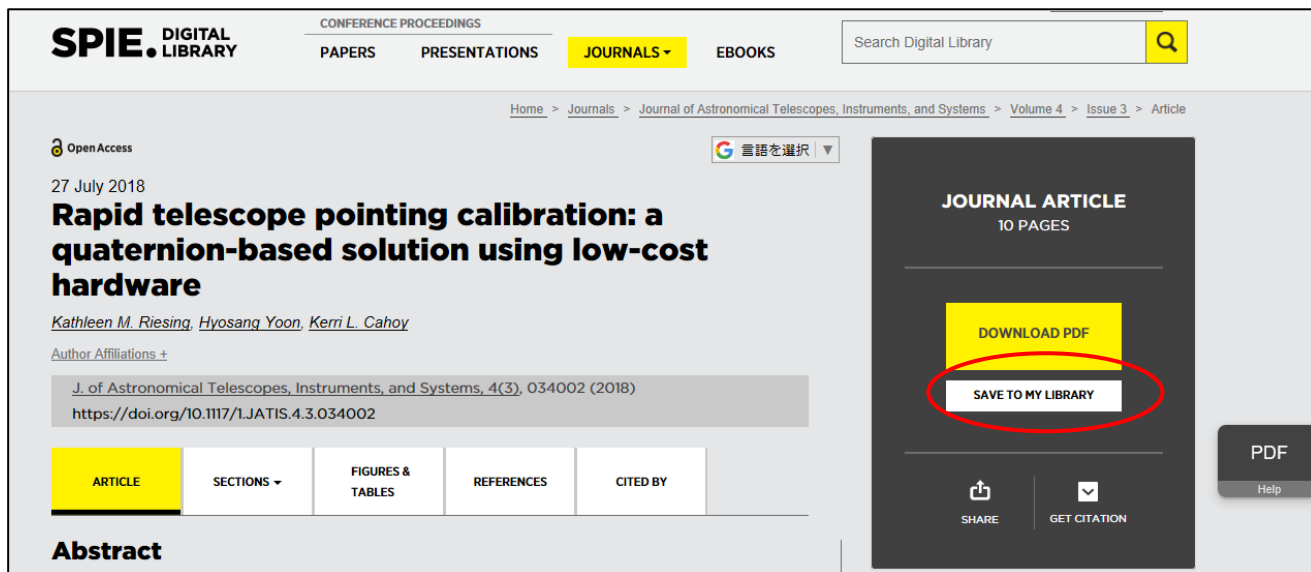
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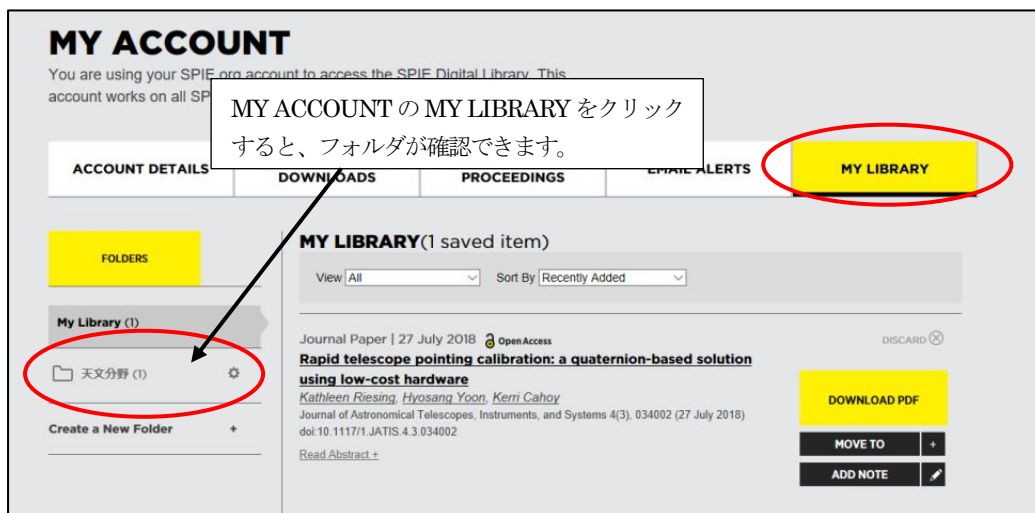
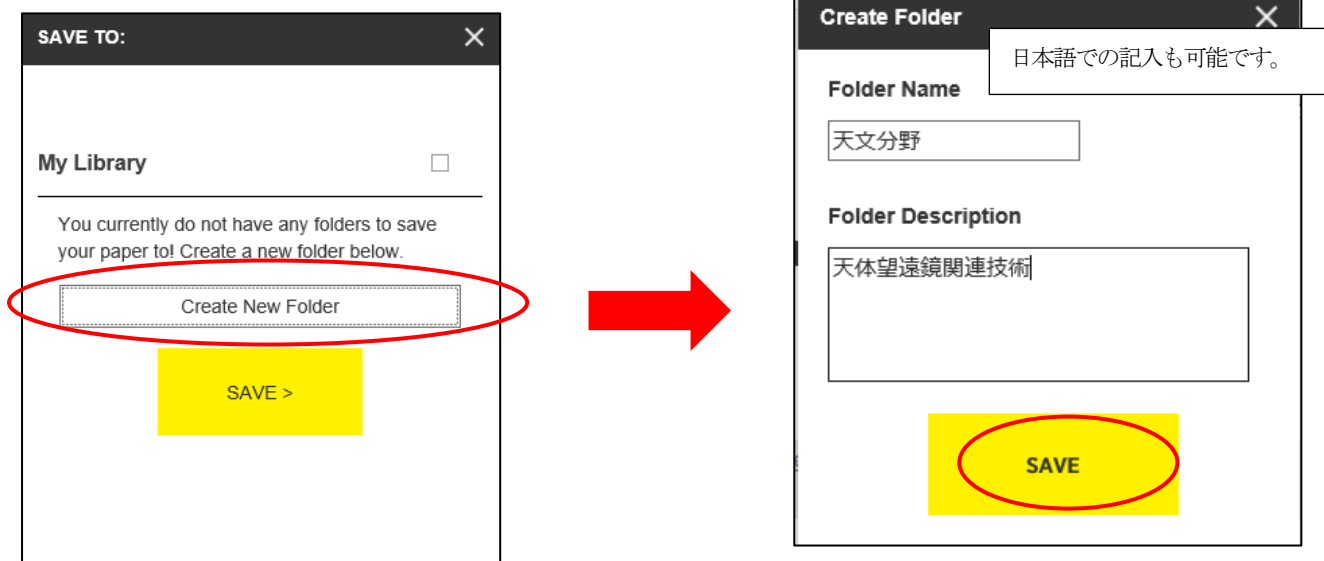


★My Library

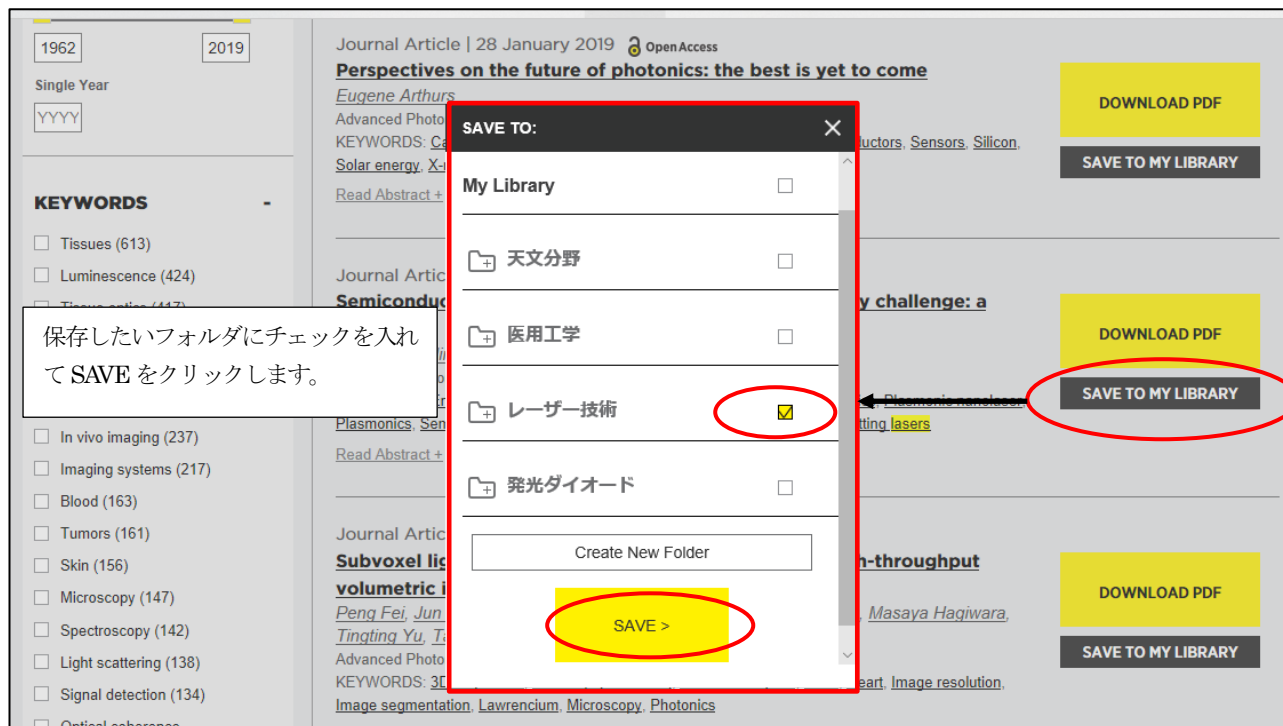
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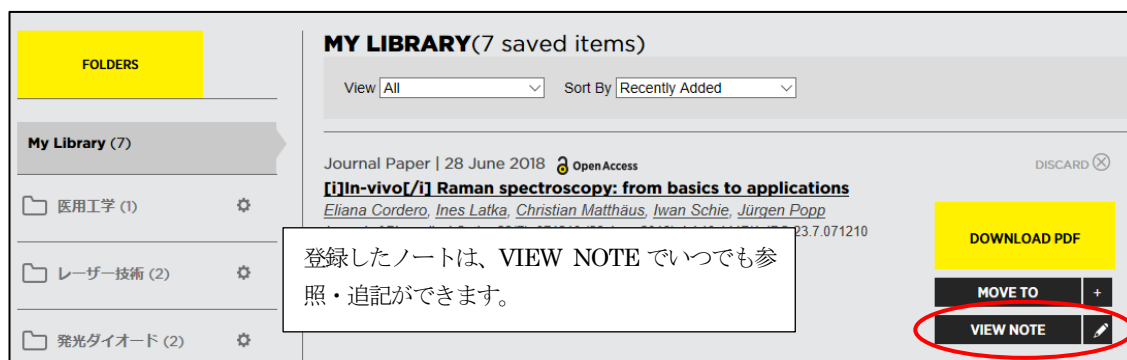
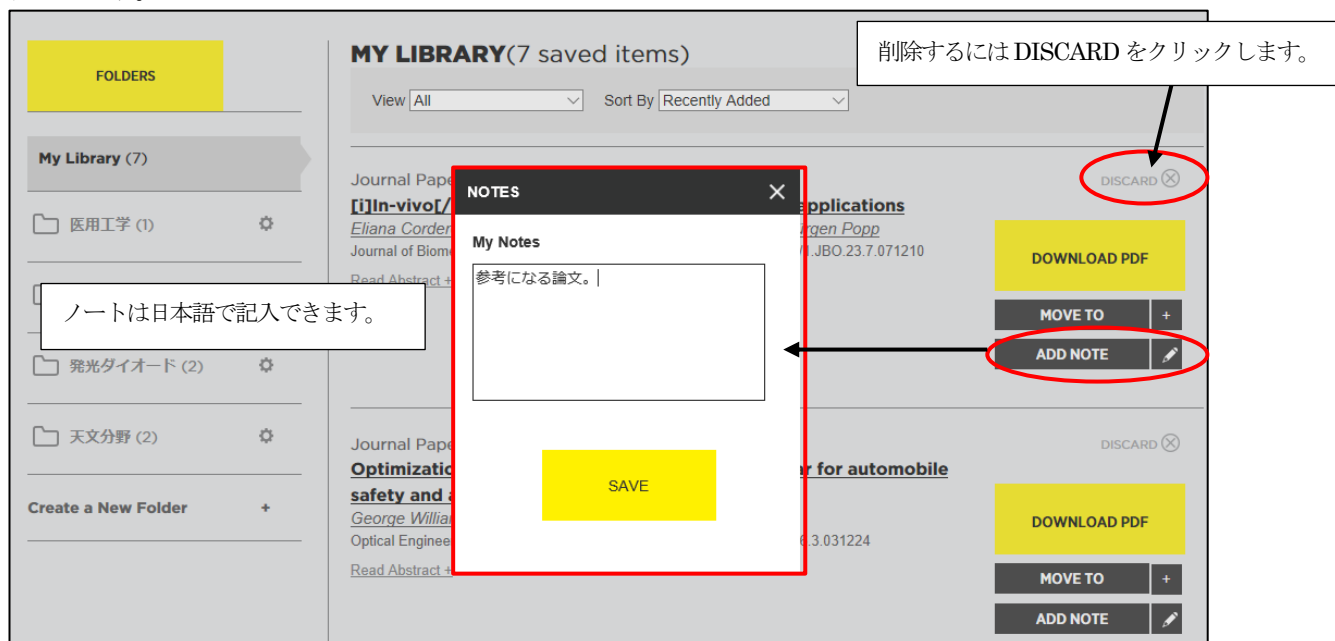
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<input type="checkbox"/> Journal of Micro/Nanolithography, MEMS, and MOEMS	<input checked="" type="checkbox"/> Journal of Nanophotonics
<input type="checkbox"/> Journal of Photonics for Energy	<input type="checkbox"/> Neurophotonics
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<input type="checkbox"/> Journal of Photonics for Energy	<input type="checkbox"/> Neurophotonics
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New Proceedings Volumes

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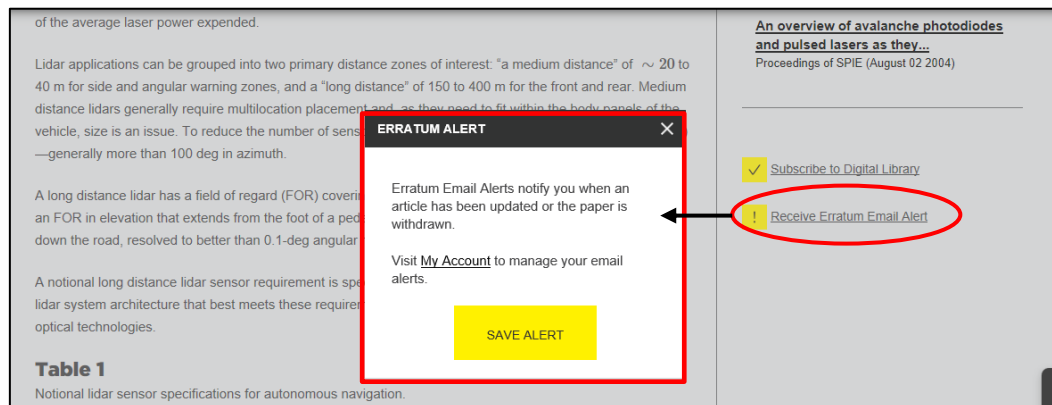
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