

Sonia García Blanco  
Associate Professor  
Optical Sciences



## Qualifications

PhD, University of Glasgow  
1 Oct 1999 → 1 Oct 2002

## Employment

**Associate Professor**  
Optical Sciences  
University of Twente  
1 Jun 2015 → present

## Awards

**RENOS: ERC Consolidator Grant**  
García Blanco, S.  
European Research Council (ERC): €2,000,000.00

## Projects

### Research output

#### **Al<sub>2</sub>O<sub>3</sub>:Yb<sup>3+</sup> integrated microdisk laser label-free biosensor**

De Goede, M., Chang, L., Mu, J., Dijkstra, M., Obregón, R., Martínez, E., Padilla, L., Mitjans, F. & Garcia-Blanco, S. M., 15 Dec 2019, In : *Optics letters*. 44, 24, p. 5937-5940 4 p.

#### **Energy-transfer upconversion and excited-state absorption in KGdxLuyEr1-x-y(WO4)2 waveguide amplifiers**

Vázquez-córdova, S. A., Aravazhi, S., Heuer, A. M., Kränkel, C., Yong, Y., García-blanco, S. M., Herek, J. L. & Pollnau, M., 1 Dec 2019, In : *Optical materials express*. 9, 12, p. 4782-4795 14 p.

#### **In-depth structural analysis of swift heavy ion irradiation in KY(WO4)2 for the fabrication of planar optical waveguides**

Frentrop, R., Subbotin, I., Segerink, F., Keim, R., Tormo-marquez, V., Olivares, J., Shcherbachev, K., Yakunin, S., Makhotkin, I. & Garcia-blanco, S. M., 1 Dec 2019, In : *Optical materials express*. 9, 12, p. 4796-4810 15 p.

#### **Comparative study of multiple thiol-based self-assembled monolayer coatings for the SERS detection of nitrite, nitrate, and perchlorate anions in water**

Muñoz, P., Noordam, C. T. N., Egberink, R. J. M., Huskens, J. & Garcia-Blanco, S. M., 22 Nov 2019, In : *Applied Optics*. 58, 34, p. 9345-9352 8 p.

#### **Lithography and reactive ion etching optimization towards low-loss TiO<sub>2</sub> waveguides**

Hegeman, I. & García Blanco, S. M., 22 Nov 2019.

#### **Dynamics of Yb<sup>3+</sup> doped Al<sub>2</sub>O<sub>3</sub> microlasers**

van Leeuwen, O., Chang, L. & Garcia Blanco, S. M., 21 Nov 2019.

#### **Performance parameter decoupled high efficiency micro ring laser cavity for biosensing**

Chang, L., De Goede, M., Dijkstra, M., Van Emmerik, C. I. & Garcia-Blanco, S. M., 17 Oct 2019, *2019 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference, CLEO/Europe-EQEC 2019*. IEEE, 8872286. (2019 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference, CLEO/Europe-EQEC 2019).

**Lapping and Polishing of Crystalline KY(WO<sub>4</sub>)<sub>2</sub>: Toward High Refractive Index Contrast Slab Waveguides**

Van Emmerik, C., Kooijman, R., Dijkstra, M. & Garcia-blanco, S., 4 Oct 2019, In : *Micromachines*. 10, 10, 674.

**Monolithic Integration of Al<sub>2</sub>O<sub>3</sub> and Si<sub>3</sub>N<sub>4</sub> Toward Double-Layer Active-Passive Platform**

Mu, J., Dijkstra, M., Yong, Y. S., De Goede, M., Chang, L. & García-Blanco, S. M., 1 Sep 2019, In : *IEEE Journal of Selected Topics in Quantum Electronics*. 25, 5, 8681108.

**High index contrast photonic platforms for on-chip Raman spectroscopy**

Raza, A., Clemmen, S., Wuytens, P., De Goede, M., Tong, A. S. K., Thomas, N. L. E., Liu, C., Suntivich, J., Skirtach, A. G., Garcia-Blanco, S. M., Blumenthal, D. J., Wilkinson, J. S. & Baets, R., 5 Aug 2019, In : *Optics express*. 27, 16, p. 23067-23079 13 p.

**Pedestal microdisks in potassium yttrium double tungstate**

Martinussen, S. M., Frentrop, R. N., Dijkstra, M., Segerink, F., Tormo-Márquez, V., Olivares, J. & Garcia-Blanco, S. M., 1 Aug 2019, In : *Optical materials express*. 9, 8, p. 3371-3378 8 p.

**Al<sub>2</sub>O<sub>3</sub> microring resonators for the detection of a cancer biomarker in undiluted urine**

De Goede, M., Dijkstra, M., Obregón, R., Ramón-azcón, J., Martínez, E., Padilla, L., Mitjans, F. & Garcia-blanco, S. M., 18 Jun 2019, In : *Optics express*. 27, 13, p. 18508-18521 14 p.

**Heterogeneous integration of KY(WO<sub>4</sub>)<sub>2</sub>-on-glass: A bonding study**

Van Emmerik, C. I., Frentrop, R., Dijkstra, M., Segerink, F., Kooijman, R., Muneeb, M., Roelkens, G., Ghibaudo, E., Broquin, J. & Garcia-blanco, S. M., 15 Jun 2019, In : *OSA Continuum*. 2, 6, p. 2065-2076 12 p.

**Monolithic integration of Al<sub>2</sub>O<sub>3</sub>:Er<sup>3+</sup> amplifiers in Si<sub>3</sub>N<sub>4</sub> technology**

Mu, J., Dijkstra, M. & García-Blanco, S. M., 1 Jun 2019, *2019 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference, CLEO/Europe-EQEC 2019*. IEEE, 8873164

**Resonant Coupling for Active-Passive Monolithic Integration of Al<sub>2</sub>O<sub>3</sub> and Si<sub>3</sub>N<sub>4</sub>**

Mu, J., Dijkstra, M. & García-Blanco, S. M., 15 May 2019, In : *IEEE photonics technology letters*. 31, 10, p. 771-774 4 p., 8674816.

**Noise analysis of a resonance sensor platform for enhanced limit of detection**

Hendriks, W. A. P. M., Korterik, J. P., de Goede, M., Dijkstra, M. & García Blanco, S. M., 13 May 2019.

**Double metal layer lift-off process for the robust fabrication of plasmonic nano-antenna arrays on dielectric substrates using e-beam lithography**

Muñoz, P., Yong, Y. S., Dijkstra, M., Segerink, F. B. & García-blanco, S. M., 1 May 2019, In : *Optical materials express*. 9, 5, p. 2046-2056 358069.

**Gain dynamics in a highly ytterbium-doped potassium double tungstate thin-film amplifier**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Herek, J. L., García-Blanco, S. M. & Pollnau, M., 1 Jan 2019, *Solid State Lasers XXVIII: Technology and Devices*. Clarkson, W. A. & Shori, R. K. (eds.). SPIE, Vol. 10896. 108961G. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10896).

**E-beam lithography for integrated optical systems**

de Goede, M., Muñoz Galindo, P., Hegeman, I., Dijkstra, M. & García Blanco, S. M., 2019.

**Sputter deposition for optical quality oxide layers**

Stok, M., van Emmerik, C. I., Hendriks, W. A. P. M., Hegeman, I., Dijkstra, M. & García Blanco, S. M., 2019.

**Development of low-loss TiO<sub>2</sub> waveguides**

Hegeman, I., Vissers, E. J. P., Dijkstra, M. & García Blanco, S. M., 15 Nov 2018.

### **Single-layer active-passive Al<sub>2</sub>O<sub>3</sub> at the wafer level: optimization study**

van Emmerik, C. I., Dijkstra, M., Chang, L., de Goede, M., Mu, J. & García Blanco, S. M., 15 Nov 2018.

### **Al<sub>2</sub>O<sub>3</sub> Microresonator Based Passive and Active Biosensors**

De Goede, M., Chang, L., Dijkstra, M., Obregon, R., Ramon-Azcon, J., Martinez, E., Padilla, L., Adan, J., Mitjans, F. & Garcia-Blanco, S. M., 26 Sep 2018, *2018 20th International Conference on Transparent Optical Networks, ICTON 2018*. IEEE Computer Society, Vol. 2018-July. 8473820. (International Conference on Transparent Optical Networks; vol. 2018-July).

### **Al<sub>2</sub>O<sub>3</sub> Integrated Photonic Technology Platform**

Mu, J., de Goede, M., Chang, L., van Emmerik, C. I., Visser, S., Dijkstra, M. & García Blanco, S. M., 24 Sep 2018.

### **Raman Spectroscopy, Free Space and On-Chip**

Lee, W., Muñoz Galindo, P., Yong, Y. S., Dijkstra, M., Vissers, E., García Blanco, S. M. & Offerhaus, H. L., 24 Sep 2018.

### **Single-layer active-passive Al<sub>2</sub>O<sub>3</sub> photonic integration platform**

Van Emmerik, C. I., Dijkstra, M., De Goede, M., Chang, L., Mu, J. & Garcia-blanco, S. M., 10 Sep 2018, In : *Optical materials express*. 8, 10, p. 3049-3054 6 p.

### **Gain dynamics in a highly ytterbium-doped potassium double tungstate epitaxial layer**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Herek, J. L., García-Blanco, S. M. & Pollnau, M., 21 Aug 2018, In : *Journal of the Optical Society of America B: Optical Physics*. 35, 9, p. 2176-2185 10 p.

### **High optical gain in erbium-doped potassium double tungstate channel waveguide amplifiers**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Yong, Y. S., García-Blanco, S. M., Herek, J. L. & Pollnau, M., 5 Mar 2018, In : *Optics express*. 26, 5, p. 6260-6266 7 p.

### **High index contrast passive potassium double tungstate waveguides**

Sefunc, M. A., Segerink, F. B. & García-Blanco, S. M., 1 Mar 2018, In : *Optical materials express*. 8, 3, p. 629-638 10 p.

### **High quality factor Al<sub>2</sub>O<sub>3</sub> microring resonators for on-chip sensing applications**

De Goede, M., Dijkstra, M., Obregón Núñez, R., Martínez, E. & García-Blanco, S. M., 23 Feb 2018, *Integrated Optics: Devices, Materials, and Technologies XXII: Devices, Materials, and Technologies XXII*. García-Blanco, S. M. & Cheben, P. (eds.). SPIE, Vol. 10535. p. 3 1053504. (INTEGRATED OPTICS: DEVICES, MATERIALS, AND TECHNOLOGIES XXII).

### **A novel polishing stop for accurate integration of potassium yttrium double tungstate on a silicon dioxide**

Van Emmerik, C. I., Martinussen, S. M., Mu, J., Dijkstra, M., Kooijman, R. & García-Blanco, S. M., 1 Jan 2018, *Integrated Optics: Devices, Materials, and Technologies XXII: Devices, Materials, and Technologies XXII*. García-Blanco, S. M. & Cheben, P. (eds.). SPIE, Vol. 10535. p. 27 105350U. (INTEGRATED OPTICS: DEVICES, MATERIALS, AND TECHNOLOGIES XXII).

### **Al<sub>2</sub>O<sub>3</sub> microresonators for passive and active sensing applications**

de Goede, M., Chang, L., Dijkstra, M., Obregón, R., Ramón-Azcón, J., Martínez, E., Padilla, L., Adan, J., Mitjans, F. & García-Blanco, S. M., 1 Jan 2018, *Optical Sensors, Sensors 2018*. Optical Society of America, Vol. Part F110-Sensors 2018. p. SeTu4E.1 SeTu4E.1. (Advanced Photonics 2018 (BGPP, IPR, NP, NOMA, Sensors, Networks, SPPCom, SOF)).

### **High-contrast slab waveguide fabrication in KY(WO<sub>4</sub>)<sub>2</sub> by swift heavy ion irradiation**

Frentrop, R. N., Tormo-Márquez, V., Olivares, J. & García-Blanco, S. M., 1 Jan 2018, *Integrated Optics: Devices, Materials, and Technologies XXII*. SPIE, Vol. 10535. 105350O. (INTEGRATED OPTICS: DEVICES, MATERIALS, AND TECHNOLOGIES XXII).

### **Monolithic integration of Al<sub>2</sub>O<sub>3</sub> and Si<sub>3</sub>N<sub>4</sub> for double-layer integrated photonic chips**

Mu, J., de Goede, M., Dijkstra, M. & García-Blanco, S. M., 1 Jan 2018, *Integrated Photonics Research, Silicon and Nanophotonics, IPRSN 2018*. Washington, D.C.: Optical Society of America, Vol. Part F101-IPRSN 2018. ITh11.1

**Pedestal disk resonator in potassium yttrium double tungstate**

Martinussen, S. M., Frentrop, R. N., Dijkstra, M., Segerink, F., Tormo-Márquez, V., Olivares, J. & García-Blanco, S., 1 Jan 2018, *Proceedings of SPIE - The International Society for Optical Engineering: Devices, Materials, and Technologies XXII*. SPIE, Vol. 10535. 105350Q. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10535).

**A novel polishing stop for accurate integration of potassium yttrium double tungstate on silicon dioxide**

van Emmerik, C. I., Martinussen, S. M., Mu, J., Dijkstra, M. & García Blanco, S. M., 27 Nov 2017.

**Reducing redeposition on KYW waveguides through hard mask engineering**

Martinussen, S. M., Dijkstra, M. & García Blanco, S. M., 27 Nov 2017.

**Low-loss, broadband and high fabrication tolerant vertically tapered optical couplers for monolithic integration of Si<sub>3</sub>N<sub>4</sub> and polymer waveguides**

Mu, J., Dijkstra, M., Yong, Y. S., Segerink, F. B., Worhoff, K., Hoekman, M., Leinse, A. & García Blanco, S. M., 1 Oct 2017, In : *Optics letters*. 42, 19, p. 3812-3815 4 p.

**Al<sub>2</sub>O<sub>3</sub> Microring Resonator for Disease Biomarker Detection**

de Goede, M., Dijkstra, M., Obregon Nunez, R., Martinez, E. & García Blanco, S. M., 25 Sep 2017.

**Towards an active biosensing platform in rare-earth ion doped Al<sub>2</sub>O<sub>3</sub> microring resonators**

De Goede, M., Dijkstra, M. & Garcia-Blanco, S. M., 1 Sep 2017, *ICTON 2017 - 19th International Conference on Transparent Optical Networks*. IEEE Computer Society, 8025016

**High optical gain in KGdxLuyEr1-x-y(WO4)2 waveguide amplifiers despite energy-transfer upconversion**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Yong, Y. S., García Blanco, S. M., Herek, J. L. & Pollnau, M., 28 Aug 2017, *International Conference on Luminescence*. paper S8C.2

**Direct confocal measurement of luminescence lifetimes on ground-state transitions with reabsorption**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Carvajal, J. J., Diaz, F., Herek, J. L., García Blanco, S. M. & Pollnau, M., 27 Aug 2017.

**Temperature dependence of the transition cross sections of rare-earth ions**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Carvajal, J. J., Diaz, F., Herek, J. L., García Blanco, S. M. & Pollnau, M., 27 Aug 2017.

**High gain in erbium-doped channel waveguides**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Yong, Y. S., García-Blanco, S. M., Herek, J. L. & Pollnau, M., 26 Jun 2017, *The European Conference on Lasers and Electro-Optics, CLEO\_Europe 2017*. Optical Society of America, Vol. Part F82-CLEO\_Europe 2017. 139018

**Temperature dependence of transition cross sections in rare-earth-doped laser materials**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Herek, J. L., García-Blanco, S. M. & Pollnau, M., 26 Jun 2017, *The European Conference on Lasers and Electro-Optics, CLEO\_Europe 2017*. Optical Society of America, Vol. Part F82-CLEO\_Europe 2017. 139018

**Temperature dependence of transition cross sections in rare-earth-doped laser materials**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Herek, J. L., García Blanco, S. M. & Pollnau, M., 25 Jun 2017.

**Roughness reduction through chemical etching of amorphized residues**

Martinussen, S. M., Dijkstra, M. & García Blanco, S. M., 14 Jun 2017.

**Double Al<sub>2</sub>O<sub>3</sub> Microring Resonator for Self-Referenced Sensing Applications**

de Goede, M., Dijkstra, M. & García Blanco, S. M., 4 Apr 2017.

### **High-Q Al<sub>2</sub>O<sub>3</sub> Microring Resonator for Sensing Applications**

de Goede, M., Dijkstra, M. & García Blanco, S. M., 4 Apr 2017.

### **Spectroscopy of erbium-doped potassium double tungstate waveguides**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Heuer, A. M., Kränkel, C., Yong, Y. S., García-Blanco, S. M., Herek, J. L. & Pollnau, M., 16 Feb 2017, *Integrated Optics: Devices, Materials, and Technologies XXI*. SPIE, Vol. 10106. 1010604

### **Temperature-dependent absorption and gain of ytterbium-doped potassium double tungstates for chip-scale amplifiers and lasers**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Herek, J. L., García-Blanco, S. M. & Pollnau, M., 16 Feb 2017, *Integrated Optics: Devices, Materials, and Technologies XXI*. SPIE, Vol. 10106. 1010606

### **Ultra-low-loss and broadband mode converters in Si<sub>3</sub>N<sub>4</sub> technology**

Mu, J., Dijkstra, M., De Goede, M., Yong, Y. S. & García-Blanco, S. M., 16 Feb 2017, *Integrated Optics: Devices, Materials, and Technologies XXI*. SPIE, Vol. 10106. 101060R

### **Towards High Contrast Potassium Double Tungstate Rib Waveguides For Laser Applications**

van Emmerik, C. I., Martinussen, S. M., Mu, J., Sefünc, M., Dijkstra, M. & García Blanco, S. M., 17 Jan 2017.

### **Direct confocal lifetime measurements on rare-earth-doped media exhibiting radiation trapping**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Carvajal, J. J., Diaz, F., Herek, J. L., García Blanco, S. M. & Pollnau, M., 2017, In : *Optical materials express*. 7, 2, p. 527-532

### **Al<sub>2</sub>O<sub>3</sub> microring resonators as a novel refractive index sensing platform**

de Goede, M., Dijkstra, M., Ramon-Azcon, M., Fraiz, J. & García Blanco, S. M., 17 Nov 2016.

### **Er-doped potassium double tungstate channel waveguides with high optical gain**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Yong, Y. S., García Blanco, S. M., Herek, J. L. & Pollnau, M., 17 Nov 2016, p. -.

### **Influence of temperature on the transition cross-sections and the optical gain of highly Yb-doped potassium double tungstates**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Herek, J. L., García Blanco, S. M. & Pollnau, M., 17 Nov 2016, p. -.

### **Low-loss highly tolerant vertical couplers for hybrid integration of Si<sub>3</sub>N<sub>4</sub> and multimode polymer waveguides**

Mu, J., Dijkstra, M., Yong, Y. S., Vázquez-Córdova, S. A. & García Blanco, S. M., 17 Nov 2016, p. -.

### **Towards High Contrast Potassium Double Tungstate Rib Waveguides For Laser Applications**

van Emmerik, C. I., Martinussen, S. M., Mu, J., Sefünc, M., Dijkstra, M. & García Blanco, S. M., 17 Nov 2016, p. -.

### **13 dB/cm gain per unit length at 1.53 μm in KGdxLuxEr<sub>1-x-y</sub>(WO<sub>4</sub>)<sub>2</sub> channel waveguides, allowing for ~40 dB total gain**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Yong, Y. S. & García Blanco, S. M., 30 Oct 2016.

### **Al<sub>2</sub>O<sub>3</sub> waveguide microring resonators as a novel biosensing platform**

de Goede, M., Dijkstra, M. & García Blanco, S. M., 26 Sep 2016, p. -.

### **Towards High Contrast Potassium Double Tungstate Rib Waveguides For Laser Applications**

van Emmerik, C. I., Martinussen, S. M., Mu, J., Sefünc, M., Dijkstra, M. & García Blanco, S. M., 4 Sep 2016, p. -.

### **Optical gain of 13 dB/cm at ~1.53 μm in KGdxLuxEr<sub>1-2x</sub>(WO<sub>4</sub>)<sub>2</sub> channel waveguides and the influence of parasitic spectroscopic processes**

Vázquez-Córdova, S. A., Aravazhi, S., Grivas, C., Heuer, A. M., Krankel, C., Yong, Y. S., García Blanco, S. M., Herek, J. L. & Pollnau, M., 21 Aug 2016, p. -.

**Fabrication of high-contrast waveguide amplifiers in erbium doped potassium double tungstates**

Sefünc, M., Alexoudi, T., Mu, J., Dijkstra, M. & García Blanco, S. M., 10 Jul 2016. 4 p.

**Waveguides reduce the influence of spectroscopic quenching on the optical gain of rare-earth-ion-doped materials**

Geskus, D., Yong, Y. S., Bernhardt, E., Agazzi, L., García Blanco, S. M., Aravazhi, S., Ismail, N. & Pollnau, M., 5 Jun 2016, p. -.

**RENOS: Rare Earth Doped Novel On-Chip Sources**

van Emmerik, C. I., Martinussen, S. M., Sefünc, M., Dijkstra, M. & García Blanco, S. M., 2 Jun 2016, p. -.

**WaterPrint<sup>®</sup>: On-chip optical sensors for the fingerprinting of contaminants in drinking water**

Muñoz Galindo, P., Noordam, C., Egberink, R. J. M., Huskens, J. & García Blanco, S. M., 2 Jun 2016.

**On-Chip Optical Sensors for The Fingerprinting of Contaminants In Drinking Water**

Muñoz Galindo, P., Noordam, C. & García Blanco, S. M., 1 Jun 2016, p. -.

**Low-loss multimode flip-chip couplers for the hybrid integration of Si<sub>3</sub>N<sub>4</sub> and polymer waveguides**

Mu, J., Dijkstra, M., Yong, Y. S., Vázquez-Córdova, S. A. & García Blanco, S. M., Mar 2016.

**Design and fabrication of adiabatic vertical couplers for hybrid integration by flip-chip bonding**

Mu, J., Sefünc, M., Xu, B., Dijkstra, M. & García Blanco, S. M., 13 Feb 2016, *SPIE Proceedings vol 9750, Integrated Optics: Devices, Materials, and Technologies XX 975012*. Broquin, J-E. & Conti, G. N. (eds.). San Francisco, CA, USA, p. 975012-1-975012-10

**Surface enhanced Raman scattering characterization of anions in drinking water**

Noordam, C., Muñoz Galindo, P., Egberink, R. J. M., Huskens, J. & García Blanco, S. M., 8 Feb 2016, p. -.

**Erbium doped waveguide amplifiers operating at the C-band**

Vázquez-Córdova, S. A., Yong, Y. S., Dijkstra, M., Herek, J. L., García Blanco, S. M. & Pollnau, M., 19 Jan 2016, p. -.

**Surface enhanced Raman scattering characterization of anions in drinking water**

Noordam, C., Muñoz Galindo, P., Egberink, R. J. M., Huskens, J. & García Blanco, S. M., 18 Jan 2016, p. -.

**A low-loss and broadband MMI-based multi/demultiplexer in Si<sub>3</sub>N<sub>4</sub>/SiO<sub>2</sub> technology**

Mu, J., Vázquez-Córdova, S. A., Sefünc, M., Yong, Y. S. & García Blanco, S. M., 2016, In : *Journal of lightwave technology*. 34, 15, p. 3603-3609

**Low-loss highly tolerant flip-chip couplers for hybrid integration of Si<sub>3</sub>N<sub>4</sub> and polymer waveguides**

Mu, J., Alexoudi, T., Yong, Y. S., Vázquez-Córdova, S. A., Dijkstra, M., Worhoff, K., Duis, J. & García Blanco, S. M., 2016, In : *IEEE photonics technology letters*. 28, 23, p. 2748-2751

**Temperature-dependent absorption and emission of potassium double tungstates with high ytterbium content**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., Carvajal, J. J., Diaz, F., Herek, J. L., García Blanco, S. M. & Pollnau, M., 2016, In : *Optics express*. 24, 23, p. 26825-26837

**Towards on-chip high index contrast rare-earth-doped potassium double tungstate amplifiers**

Sefunc, M. A., Vaiti, V., Dijkstra, M., Segerink, F. & Garcia-Blanco, S. M., 12 Aug 2015, *ICTON 2015 - 17th International Conference on Transparent Optical Networks*. IEEE Computer Society, Vol. 2015-August. 7193489

**Optical gain around 1.5  $\mu\text{m}$  in erbium-doped waveguide amplifiers**

Vázquez-Córdova, S. A., Yong, Y. S., Herek, J. L., García Blanco, S. M. & Pollnau, M., 5 Jul 2015, *17th International Conference on Transparent Optical Networks, ICTON 2015*. USA: IEEE Photonics Society, p. Paper Th.A5.4 4 p.

**1050 dB/cm gain in a 57.5at.% Yb-doped KGd(WO<sub>4</sub>)<sub>2</sub> thin film at 981 nm**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., García-Blanco, S. M. & Pollnau, M., Jun 2015, *Conference on Lasers and Electro-Optics Europe, CLEO 2015*. European Physical Society (EPS), 1 p. CE-7.3-Mon

**Concentration dependence of optical gain in Yb<sup>3+</sup>-doped potassium double tungstate channel waveguides**

Geskus, D., Yong, Y. S., Bernhardt, E., Agazzi, L., García Blanco, S. M., Aravazhi, S. & Pollnau, M., Jun 2015, *Conference on Lasers and Electro-Optics Europe, CLEO 2015*. Mulhouse: European Physical Society (EPS), p. Paper CJ-6a.3 1 p.

**Highly Yb-doped KGd(WO<sub>4</sub>)<sub>2</sub> thin-film amplifier**

Yong, Y. S., Aravazhi, S., Vázquez-Córdova, S. A., García Blanco, S. M. & Pollnau, M., May 2015, *2015 Conference on Lasers and Electro-Optics, CLEO 2015*. Washington, D.C.: Optical Society of America, Vol. 2015-August. p. Paper STh1G.5 2 p. 7183967

**On the efficiency of Tm-doped 2-µm lasers**

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