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LABORATORY OF SOLID-STATE QUANTUM ELECTRONICS

- PATENTS RESULTED from our RESEARCH and INTERNATIONAL COLLABORATIONS -

x. A. Birtas, N. Boicea, T. Dascalu, N. Pavel, G. Salamu, O.-V. Grigore, "Bujie cu laser pentru un motor cu ardere," OSIM application number A/10028/2016/ 18.05.2016, Romania; "A laser spark plug for a combustion engine," INPI - Institut National de la Propriété Industrielle, Numéro de soumission: 000347665 / 18.05.2016, France.

x. K. Kanehara, N. Pavel, T. Taira, M. Tsunekane, "Laser ignition system," International Patent Classification: F02P-023/04. Patent Number(s): WO2012039123-A1 (Publication date: 29 March 2012; Application WOJP005268/20 Sep 2011); JP2012087774-A (Publication date: 10 May 2012; Application JP012645/25 Jan 2011); US2013186362-A1 (Publication date: 25 July 2013; Application US13825467/21 Mar 2013).

x T. Dascalu, N. Pavel, G. Salamu, O. Grigore, F. Voicu, M. Dinca, "Sistem laser monolitic, compozit si compact cu livrare simultana a doua fascicule laser / Compact, composite, monolithic laser system with simultaneous emission of two laser beams," Romanian patent, No. RO129307-A0, Publication date 28.03.2014; OSIM application number A-100417 / 03.05.2013. International Patent Classification: A61M-005/31; B65B-003/04.

x. T. Dascalu, O. Sandu, F. Voicu, N. Pavel, G. Salamu, M. Dinca, "Sistem Laser pentru Ignitia Motoarelor cu Ardere Interna," Romanian patent, No. 126373 A0, published in BOPI 6 2011. Application number: A 2010 01326; Date of publication of application: 30.06.2010; International classification: A61M 5/31 (2006.01); B65B 3/04(2006.01).

23. **Romanian Patent, No. RO122238** (27.02.2009)
"Laser cu Mediu Activ in Forma de Lentila, Pompat Transversal cu Diode Laser,"
T. Dascalu, C. Dascalu

22. **Patent No. WO2005-091448** (29.09.2005)
"Light Entrance Window for Solid-State Laser Equipment Light Guide,"
T. Dascalu, M. Tsunekane, T. Taira

21. **Patent No. WO2005-091446** (29.09.2005)
"Solid-State Laser Equipment,"
M. Tsunekane, T. Dascalu, T. Taira

20. **United States Patent, No. 6.931.047** (16.08.2005)
"Laser Light Source,"
H. Kan, A. Sone, H. Sakai, T. Taira, N. Pavel, V. Lupei

19. **United States Patent, No. 6.594.299** (15.07.2003), and **No. 6.738.407** (18.05.2004), and **No. 7.221.694** (22.05.2007)
"Semiconductor Laser Light Emitting Apparatus and Solid-State Laser Rod Pumping Module,"
Y. Hirano, S. Yamamoto, Y. Koyata, N. Pavel

18. **Japan Patent, Publication No. 2008-300885** (11.12.2008)
"Semiconductor Laser Light Emitting Apparatus and Solid-State Laser Rod Excitation Module,"
Y. Koyata, S. Yamamoto, N. Pavel, Y. Hirano

17. **Japan Patent, Publication No. 2004-356479** (16.12.2004)
"Laser Equipment,"
T. Taira, T. Dascalu

16. **Japan Patent, Publication No. 2004-119487** (15.04.2004)
"Laser Equipment,"
T. Taira, N. Pavel, V. Lupei, I. Shoji, Y. Sato

15. **Japan Patent, Publication No. JP2004-152817** (27.05.2004)
"Laser Apparatus,"
T. Taira, T. Dascalu, N. Pavel

14. **Japan Patent, Publication No. 2003-332657** (21.11.2003)
"Laser System,"
T. Wada, T. Ogawa, T. Taira, I. Shoji, Y. Sato, V. Lupei, N. Pavel

13. **Japan Patent, Publication No. 2003-198019** (11.07.2003)
"Laser Light Source,"
H. Suga, A. Sone, H. Sakai, H. Hirato, N. Pavel, V. Lupei

12. **Japan Patent, Publication No. 2000-312043** (07.11.2000)
"Semiconductor Laser Light Output Device and Solid-State Laser Rod Excitation Module,"
Y. Hirano, S. Yamamoto, N. Pavel, Y. Koyata

11. **Romanian Patent, No. RO116693** (30.04.2001)
"Laser Having Two Active Media Nd:YAG with Continuous Wave Operation Mode and Simultaneous Switch,"
T. Dascalu, V. Lupei

10. **Romanian Patent, No. RO114516** (30.04.1999)
"Dichroic Mirror for Lasers,"
A. Dinca, V. Lupei

9. **Romanian Patent, No. RO114379** (30.03.1999)
"Interferential Mirror with Gradual Variation of Reflectance,'"
A. Dinca, V. Lupei

8. **Romanian Patent, No. RO114380** (30.03.1999)
"Interferential Plane Polarizer,"
A. Dinca, V. Lupei

7. **Romanian Patent, No. RO114702** (30.06.1999)
"Quality Factor Switching Device Using Externally Controlled Saturated Absorption,"
T. Dascalu V. Lupei

6. **Romanian Patent, No. RO107785** (30.12.1993)
"Power Source for Lasers with Pulsatory Function with Regulated Pulse Duration,"
T. Dascalu, V. Dascalu, V. Lupei, V. Florea

5. **Romanian Patent, No. RO107540** (30.12.1993)
"Coupling Device for Optical Fibre-Sapphire Terminal,"
V. Lupei, V. Ionita-Manzatu, A. Moroseanu, I.D. Toma

4. **Romanian Patent, No. RO100654** (15.11.1991)
"Laser Beam to Optical Fibre Opto-Mechanic Coupler,"
V. Lupei, V. Ionita-Manzatu, A. Moroseanu, D. Gheorghe

3. **Romanian Patent, No. RO100776** (29.11.1991)
"Module for High Power Laser with Continuous Operating,"
V. Lupei, D. Gheorghe, V. Ionita-Manzatu, A. Moroseanu

2. **Romanian Patent, No. RO101033** (09.09.1991)
"Laser Constant Flow Supplying Power Unit,"
V. Lupei, V. Ionita-Manzatu, A. Moroseanu, I. Parvu

1. **Romanian Patent, No. RO82055** (01.06.1983)
"Method and device for profiled crystal growth,"
Voicu Lupei, Dorel Toma