

LIST OF SCIENTIFIC PAPERS

263. A. Lupei, V. Lupei, S. Hau, "Vibronics in optical spectra of Yb³⁺ and Ce³⁺ in YAG and Y₂O₃ ceramics," Opt. Mat. **63**, 143-152 (2017).
262. V. Lupei, A. Lupei, C. Gheorghe, A. Ikesue, "Emission sensitization processes involving Nd³⁺ in YAG," J. Lumin. **170**(2), 594-601 (2016).
261. V. Lupei, A. Lupei, C. Gheorghe, and A. Ikesue, "Spectroscopic and de-excitation properties of (Cr,Nd):YAG transparent ceramics," Opt. Mat. Express **6**(2), 552-557 (2016).
260. V. Lupei and A. Lupei, "Nd:YAG at its 50th anniversary: Still to learn," J. Lumin. **169** (Part B), 426-439 (2016).
259. A. Lupei, V. Lupei, S. Hau, C. Gheorghe, F. Voicu, "Structure and temperature effects on Nd³⁺ spectra in polycrystalline mixed scandium aluminum garnets Y₃Sc_xAl_{5-x}O₁₂," Opt. Mat. **47**, 465-472 (2015).
258. A. Lupei, V. Lupei, C. Gheorghe, S. Hau, and A. Ikesue, "Multicenters in Ce³⁺ visible emission of YAG ceramics," Opt. Mat. **37**, 727-733 (2014).
257. V. Lupei, N. Pavel, and A. Lupei, "Improved laser efficiency by direct diode laser pumping of the radiation-resistant Nd:Gadolinium-Scandium-Gallium Garnet," Laser Physics **24** (4), 045801 (2014).
256. A. Lupei, V. Lupei, and C. Gheorghe, "Electronic structure of Sm³⁺ ions in YAG and cubic sesquioxide ceramics," Opt. Mat. **36** (2), 419-424 (2013).
255. A. Lupei, V. Lupei, and C. Gheorghe, "Thermal shifts of Sm³⁺ lines in YAG and cubic sesquioxide ceramics," Opt. Mat. Express **3** (10), 1641-1646 (2013).
254. V. Lupei, A. Lupei, C. Gheorghe, L. Gheorghe, A. Achim, and A. Ikesue, "Crystal field disorder effects in the optical spectra of Nd³⁺ and Yb³⁺-doped CLNGG laser crystals and ceramics," J. Appl. Phys. **112** (6), 063110 (2012).
253. V. Lupei, "Pump intensity dependence of emission quantum efficiency in Nd-doped materials," Rom. Rep. Phys. **64** (S), 1291-1305 (2012).
252. C. Gheorghe, A. Lupei, V. Lupei, and L. Gheorghe, "A comparative study of Nd³⁺ and Sm³⁺ ions doped into oxide host materials; correlation between structure and spectral properties," Optoelectronics and Advanced Materials - Rapid Communications **6** (1-2), 44-48 (2012).
251. V. Lupei, "Low-heat solid state lasers," Rom. Rep. Phys. **63**, Supplement, 1236-1253 (2011).
250. A. Lupei, V. Lupei, C. Gheorghe, A. Ikesue, and M. Enculescu, "Spectroscopic characteristics of Dy³⁺ doped Y₃Al₅O₁₂ transparent ceramics," J. Appl. Phys. **110**, 083120 (2011).
249. A. Lupei, V. Lupei, C. Gheorghe, and A. Ikesue, "Spectroscopic investigation of Sm³⁺ in YAG ceramic," Rom. Reports Phys. **63** (3), 817-822 (2011).
248. C. Gheorghe, A. Lupei, V. Lupei, A. Ikesue, M. Enculescu, "Intensity parameters of Tm³⁺ doped Sc₂O₃ transparent ceramic laser material," Opt. Mat. **33** (3), 501-505 (2011).
247. V. Lupei, A. Lupei, C. Gheorghe, and A. Ikesue, "Sensitized Yb³⁺ emission in (Nd, Yb):YAG transparent ceramics," J. Applied Physics, **108** (12) 123112 (2010).

246. V. Lupei, A. Lupei, and A. Ikesue, "Multicenter Structure and Dynamical Processes in the Rare Earth Doped Garnet and Sesquioxide Laser Crystals and Ceramics," *Spectroscopy Letters* **43** (5), 357-372 (2010).
245. A. Lupei, V. Lupei, A. Ikesue, C. Gheorghe, S. Hau, "Nd-Yb energy transfer in (Nd, Yb):Y₂O₃ transparent ceramics", *Opt. Mat.* **32** (10), 1333-1336 (2010).
244. A. Lupei, V. Lupei, A. Ikesue, C. Gheorghe, "Spectroscopic and energy transfer investigation of Nd/Yb in Y₂O₃ transparent ceramics," *J. Opt. Soc. Am. B* **27** (5), 1002-1010 (2010).
243. C. Gheorghe, A. Lupei, V. Lupei, L. Gheorghe, S. Hau, "Judd-Ofelt analysis of Nd³⁺ in CLNGG single crystals," *Journal of Optoelectronics and Advanced Materials* **12** (4), 818- 820 (2010).
242. V. Lupei, A. Lupei, A. Ikesue, C. Gheorghe, S. Hau, "Sensitization of Yb³⁺ emission in laser oxide ceramics," *Rom. Reports in Physics* **62** (3), 429-443 (2010).
241. V. Lupei, "Laser processes and active materials for sustainable energy production," *Rom. Reports in Physics* **62** (3), 481-499 (2010).
240. V. Lupei, A. Lupei, A. Ikesue, "Multicenter structure and dynamical processes in the rare earth doped garnet and sesquioxide laser crystals and ceramics", *Spectroscopy Letters* **43** (5), 357-372 (2010).
239. S. Goldring, R. Lavi, V. Lupei, "Decay dynamics of excited Nd³⁺ ions in YVO₄ following weak excitation", *IEEE J. Quantum Electron.* **46** (2), 169-181 (2010).
238. A. Lupei, A. Achim, V. Lupei, C. Gheorghe, L. Gheorghe, S. Hau, "RE³⁺ doped SrWO₄ as laser and nonlinear active crystals", *Rom. J. Phys.* **54** (9-10), 919-928 (2009).
237. V. Lupei, A. Lupei, C. Gheorghe, A. Ikesue, and E. Osiac, "Energy transfer driven infrared emission processes in rare earth doped Sc₂O₃ ceramics", *Journal of Luminescence*, **129** (12), 1862-1865 (2009).
236. N. Pavel, T. Dascalu, G. Salamu, O. Sandu, A. Leca, and V. Lupei, "Q-switched Nd lasers pumped directly into the ⁴F_{3/2} emitting level," *Opt. Commun.* **282** (24), 4749-4754 (2009).
235. A. Lupei, V. Lupei, C. Gheorghe, A. Ikesue, E. Osiac, "Upconversion emission of RE³⁺ in Sc₂O₃ ceramic under 800 nm pumping," *Opt. Mat.* **31** (5), 744-749 (2009).
234. C. Gheorghe, A. Lupei, V. Lupei, A. Ikesue "Spectroscopic properties of Ho³⁺ doped Sc₂O₃ transparent ceramic for laser materials", *J. Appl. Phys.* **105** (12), 123110 (2009).
233. V. Lupei, A. Lupei, C. Gheorghe, A. Ikesue, "Efficient sensitization of Yb³⁺ emission by Nd³⁺ in Y₂O₃ transparent ceramics and the prospect for high-energy Yb lasers", *Opt. Lett.* **34** (14), 2141-2143 (2009).
232. N. Pavel, T. Dascalu, N. Vasile, V. Lupei, "Efficient 1.34-μm laser emission of Nd-doped vanadates under in-band pumping with diode lasers," *Laser Phys. Lett.* **6** (1), 38-43 (2009).
231. V. Lupei, "Ceramic laser materials and the prospect for high power lasers," *Opt. Mat.* **31** (5), 701-706 (2009).
230. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, A. Achim, "Multicenter structure of the optical spectra and the charge-compensation mechanisms in Nd:SrWO₄ laser crystals", *J. Appl. Phys.* **104**, 083102 (2008).
229. A. Achim, L. Gheorghe, V. Lupei, A. Lupei, C. Gheorghe, "Co-doping effects on SrWO₄: Nd³⁺ crystals for RAMAN lasers", *J. Optoelectron. & Advanced Mat.* **10** (6), 1353-1356 (2008).
228. A. Lupei, V. Lupei, C. Gheoghe, L. Gheorghe, C. Aka, D. Vivien, "Cationic disorder effects in complex oxide laser materials and phosphors," *Opt. Mat.* **30** (11), 1677-1681 (2008).
227. V. Lupei, A. Lupei, A. Ikesue, "Transparent polycrystalline ceramic laser materials", *Opt. Mat.* **30** (11), 1781-1786 (2008).
226. J. Legenziewicz, M. Guzik, J. Cybinska, A. Stefan, V. Lupei, "Concentration dependence of luminescence properties in Praseodymium and Praseodymium-Ytterbium-doped Lutetium double phosphates," *Opt. Mat.* **30** (11), 1667-1671 (2008).

225. V. Lupei, "Comparative spectroscopic investigation of rare earth doped oxide transparent ceramics and single crystals," *J. Alloys Comp.* **451** (1-2), 52-55 (2008).
224. V. Lupei, A. Lupei, G. Boulon, A. Jouini, A. Ikesue, "Cooperative absorption and emission in Yb:Sc₂O₃ ceramics," *J. Alloys and Comp.* **451** (1-2), 179-181 (2008).
223. J. Legendziewicz, M. Guzik, J. Cybinska, A. Stefan, V. Lupei, "Optical behaviour of praseodymium-doped and praseodymium/ytterbium-co-doped double phosphates," *J. Alloys Comp.* **451** (1-2), 158-164 (2008).
222. C. Gheorghe, S. Georgescu, V. Lupei, A. Lupei, "Judd Ofelt analysis of the Er³⁺ (4f¹¹) absorption intensities in Er³⁺-doped Sc₂O₃" *J. Optoelectron. & Advanced Mat* **10** (2), 359-362 (2008).
221. A. Lupei, V. Lupei, C. Gheorghe, A. Ikesue, "Excited state dynamics of Er³⁺ in Sc₂O₃ ceramic," *J. Luminesc.* **128** (5-6), 918-920 (2008).
220. V. Lupei, A. Lupei, C. Gheorghe, A. Ikesue, "Comparative high-resolution spectroscopy and emission dynamics of Nd-doped GSGG crystals and transparent ceramics," *J. Luminesc.* **128** (5-6), 885-887 (2008).
219. V. Lupei, A. Lupei, C. Gheorghe, A. Ikesue, "Spectroscopic characteristics of Tm³⁺ in Tm and Tm, Nd, Yb:Sc₂O₃ ceramic," *J. Lumin.* **128** (5-6), 901-904 (2008).
218. C. Gheorghe, S. Georgescu, V. Lupei, A. Lupei, A. Ikesue, "Absorption intensities and emission cross-section of Er³⁺ in Sc₂O₃ transparent ceramics," *J. Appl. Phys.* **103**, 083116 (2008).
217. C. Gheorghe, A. Lupei, V. Lupei, L. Gheorghe, A. Achim, D. Vivien, G. Aka, "Comparative study of spectroscopic behavior of Nd³⁺ in magnetoplumbite type laser crystals," *J. Optoelectron. Adv. Mat* **9**, 1281 (2007).
216. M.T. Andersen, J.L. Mortensen, S. Germershausen, L. Gheorghe, V. Lupei, G. Aka, "First measurement of the nonlinear coefficient for Gd_{1-x}Lu_xCa₄O(BO₃)₃ and Gd_{1-x}Sc_xCa₄O(BO₃)₃," *Opt. Express* **15**, 4893 (2007).
215. V. Lupei, A. Lupei, A. Ikesue, "High-Resolution Spectroscopic Properties and Emission Decay of Rare-Earth Doped Transparent Laser Ceramics," *Phys. Stat. Sol. (c)* **4**, 1376 (2007).
214. V. Lupei, A. Lupei, C. Gheorghe, L. Gheorghe, "Composition dependence of Pr³⁺ spectral characteristics in strontium Lanthanum Aluminate crystals," *Opt. Mat.* **20**, 164 (2007).
213. L. Gheorghe, P. Loiseau, G. Aka, V. Lupei, "Investigation of NCPM second harmonic generation and self frequency doubling in Gd_{1-x-y}R_xNd_yCa₄O(BO₃)₃ (R=Sc or Lu) crystals," *Opt. Mat.* **20**, 44 (2007).
212. G. Boulon, V. Lupei, "Energy transfer and cooperative processes in Yb³⁺-doped cubic sesquioxide laser ceramics and crystals," *J. Luminesc.* **125**, 45 (2007).
211. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, G. Aka, "Disorder effects in Nd³⁺ doped strontium hexa- aluminate laser crystals," *J. Phys. : Condens. Matter* **18**, 597 (2006).
210. N. Pavel, V. Lupei, T. Taira, "Neodymium concentration dependence of 0.94, 1.06 and 1.34 μm laser emission and of heating effects under 809 and 885-nm diode laser pumping of Nd:YAG," *Appl. Phys. B* **82**, 599 (2006).
209. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, E. Antic-Fidancev, D. Vivien, G. Aka, "Polarization Effects of Nd³⁺ Spectra In Strontium Hexa-Aluminates," *J. Optoelectron. Adv. Mat.* **8**, 86 (2006).
208. L. Gheorghe, V. Lupei, A. Lupei, C. Gheorghe, A. Achim, G. Aka, C. Varona, "Growth And Characterization of Nd³⁺ Doped Strontium Hexa-Aluminates Single Crystals," *J. Optoelectron. Adv. Mat.* **8**, 82 (2006).
207. L. Gheorghe, V. Lupei, A. Achim, G. Aka, C. Varona, "Growth and optical properties of GdCa₄O(BO₃)₃: RE crystals (RE = Sc or Lu) as new nonlinear materials," *J. Optoelectron. Adv. Mat.* **8**, 91 (2006).
206. V. Lupei, G. Aka, D. Vivien, "Highly efficient, 0.84 slope efficiency 901 nm quasi-two-level laser emission of Nd in Strontium Lanthanum Aluminate," *Opt. Letters* **31**, 1064 (2006).

205. L. Gheorghe, V. Lupei, P. Loiseau, G. Aka, T. Taira, "Second harmonic generation of blue light in nonlinear optical crystals of $Gd_{1-x}Lu_xCa_4O(BO_3)_3$ and $Gd_{1-x}Sc_xCa_4((BO_3)_3)$ through non-critical phase matching," *J. Opt. Soc. Amer.* **23**, 1630 (2006).
204. L. Gheorghe, P. Loiseau, G. Aka, V. Lupei, "Growth and Type-I noncritical phase-matching second-harmonic-generation of $Gd_{1-x}R_xCa_4O(BO_3)_3$ (R=Sc or Lu) crystals," *J. Cryst. Growth* **294**, 442 (2006).
203. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, G. Aka, "Spectroscopic investigation of Nd in ASL," *Phys. St. Sol. (c)* **2**, 276 (2005).
202. V. Lupei, G. Aka, "Enhanced 532 nm emission by frequency-doubling of the one-micron Nd:Yttrium Vanadate laser in Gadolinium Calcium Oxoborate," *J. Appl. Phys.* **97**, 056104 (2005).
201. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, G. Aka, "Cationic Distribution and Spectral Properties of Nd^{3+} in HexaAluminate Laser Crystals," *Trends in Optics and Photonics* **98**, 52 (2005).
200. V. Lupei, A. Lupei, A. Ikesue, "Spectroscopic Properties of Nd^{3+} and Highly Efficient Nd^{3+} to Yb^{3+} Energy Transfer in Transparent Sc_2O_3 Ceramics," *Trends in Optics and Photonics* **98**, 41 (2005).
199. V. Lupei, G. Aka, D. Vivien, "Highly Efficient 900 nm Laser Emission of Nd^{3+} in Strontium Lanthanum Aluminate," *Trends in Optics and Photonics* **98**, 177 (2005).
198. V. Lupei, G. Aka, "Enhanced Efficiency of Second Harmonic Generation in GdCOB of the Nd:YVO₄ Laser under Direct $^4F_{3/2}$ Pumping," *Trends in Optics and Photonics* **98**, 478 (2005).
197. C. Verona, P. Loiseau, G. Aka, V. Lupei, B. Ferrand, "900 nm Infrared Laser Emission and Second Harmonic Generation of Nd Doped ASL," *Trends in Optics and Photonics* **98**, 177 (2005).
196. V. Lupei, A. Lupei, A. Ikesue, "Transparent Nd and (Nd,Yb)-doped Sc_2O_3 ceramics as potential new laser materials," *Appl. Phys. Lett.* **86**, 111118 (2005).
195. L. Gheorghe, V. Lupei, A. Lupei, C. Gheorghe, C. Varona, P. Loiseau, G. Aka, D. Vivien, B. Ferrand, "Czochralski growth and characterization of neodymium-doped strontium lanthanum aluminate (ASL:Nd) single crystals," *J. Cryst. Growth* **277**, 410 (2005).
194. N. Pavel, V. Lupei, T. Taira, "1.34- μ m efficient lasing emission in highly-doped Nd:YAG under 885-nm diode pumping," *Opt. Express* **13**, 7948 (2005).
193. I. Ursu, V. Lupei, "Stimulated emission, solid-state quantum electronics and photonics: relation to composition, structure and size," *Roum. Repts. Phys.* **57**, 820 (2005).
192. V. Lupei, A. Lupei, A. Ikesue, "Single crystal and transparent ceramic Nd-doped oxide laser materials: a comparative spectroscopic investigation," *J. Alloys. Comp.* **380**, 61 (2004).
191. A. Lupei, V. Lupei, C. Gheorghe, D. Vivien, G. Aka, P. Aschehoug, "Spectroscopic and structural properties of Nd^{3+} doped strontium lanthanum aluminate laser crystals," *J. Appl. Phys.* **96**, 3057 (2004).
190. V. Lupei, G. Aka, J. Petit, D. Vivien, "Spectroscopic bases for efficiency enhancement and power scaling of self-frequency-multiplication and self-sum-frequency-mixing emission in Nd-doped nonlinear crystals," *J. Opt. Soc. Amer. B* **21**, 1620 (2004).
189. G. Aka, D. Vivien, V. Lupei, "Site-selective 900 nm quasi-three-level emission in Nd-doped strontium lanthanum aluminate," *Appl. Phys. Lett.* **85**, 2685 (2004).
188. Y. Sato, T. Taira, N. Pavel, V. Lupei, "Laser operation with near quantum-defect slope efficiency in Nd:YVO₄ under direct pump in the emitting level," *Appl. Phys. Lett.* **82**, 844 (2003).
187. V. Lupei, I. Ursu, G. Aka, D. Vivien, "Self-frequency-doubling of laser emission in Nd-doped nonlinear crystals: new modalities for efficiency enhancement," *Rom. J. Phys.* **48**, 197 (2003).
186. V. Lupei, A. Lupei, N. Pavel, I. Ursu, T. Taira, I. Shoji, Y. Sato, A. Ikesue, "Spectroscopy and laser emission in concentrated Nd-activated crystals and ceramics," *Rom. J. Phys.* **48**, 49 (2003).

185. A. Lupei, V. Lupei, T. Taira, Y. Sato, A. Ikesue, C. Gheorghe, "Energy transfer processes of Nd³⁺ in Y₂O₃ ceramics," J. of Luminesc. **102/103**, 72 (2003).
184. Y. Sato, N. Pavel, T. Taira, V. Lupei, "Laser oscillation with more than 80% slope efficiency in Nd:YVO₄ under direct pumping into the emitting level," Trends in Optics and Photonics **83**, 26 (2003).
183. A. Lupei, V. Lupei, "RE³⁺ pairs in garnets and sesquioxides," Optical Materials **24**, 181 (2003).
182. V. Lupei, "Efficiency enhancement and power scaling of Nd lasers," Optical Materials **24**, 353 (2003).
181. V. Lupei, N. Pavel, T. Taira, "Basic enhancement of the overall optical efficiency of intracavity frequency-doubling devices for the one-micron continuous-wave Nd:Y₃Al₅O₁₂ laser emission," Appl. Phys. Lett. **83**, 3653 (2003).
180. V. Lupei, N. Pavel, Y. Sato, T. Taira, "Highly efficient 1063-nm continuous-wave laser emission in Nd:GdVO₄," Optics Lett. **28**, 2366 (2003).
179. V. Lupei, N. Pavel, T. Taira, "Efficient Laser Emission in Concentrated Nd Laser Materials Under Pumping Into the Emitting Level," IEEE J. of Quantum Electron. **38**, 240 (2002).
178. I. Shoji, Y. Sato, S. Kurimura, V. Lupei, T. Taira, A. Ikesue, K. Yoshida, "Thermal-birefringence-induced depolarization in Nd:YAG ceramics," Opt. Lett. **27**, 234 (2002).
177. V. Lupei, A. Lupei, S. Georgescu, B. Diaconescu, T. Taira, Y. Sato, S. Kurimura, A. Ikesue, "High-resolution spectroscopy and emission decay in concentrated Nd:YAG ceramics," J. Opt. Soc. Amer. B **19**, 360 (2002).
176. V. Lupei, N. Pavel, T. Taira, "Highly efficient laser emission in concentrated Nd:YVO₄ components under direct pumping into the emitting level," Opt. Commun. **201**, 431 (2002).
175. V. Lupei, "RE³⁺ emission in garnets: multisites, energy transfer and quantum efficiency," Optical Materials **19**, 95 (2002).
174. V. Lupei, G. Aka, D. Vivien, "Enhanced self-doubling efficiency in directly pumped Nd-activated nonlinear crystals: case of GdCOB," OSA Trends in Optics and Photonics, **86**, 44 (2002).
173. V. Lupei, G. Aka, D. Vivien, "Quasi-three-level Laser Emission at 946-nm in Nd:YAG under Direct Pump in the Emitting Level," OSA Trends in Optics and Photonics, **86**, 434 (2002).
172. V. Lupei, G. Aka, D. Vivien, "Quasi-three-level 946-nm emission of Nd:YAG under direct pumping at 885-nm into the emitting level," Opt. Commun. **204**, 399 (2002).
171. V. Lupei, N. Pavel, T. Taira, "1064-nm Laser Emission of Highly Doped Nd:YAG Active Components under 885-nm Diode Laser Pumping," Appl. Phys. Lett. **80**, 4309 (2002).
170. V. Lupei, G. Aka, D. Vivien, "Enhanced fundamental and self-frequency-doubling laser emission efficiency in ⁴F_{3/2} directly-pumped Nd-activated nonlinear crystals: case of GdCOB," Appl. Phys. Lett. **81**, 811 (2002).
169. V. Lupei, N. Pavel, T. Taira, "Highly-efficient continuous-wave 946 nm laser emission under direct 885 nm pumping," Appl. Phys. Lett. **81**, 2677 (2002).
168. V. Lupei, "Selfquenching of Nd³⁺ emission in laser garnet crystals," Optical Materials **16**, 137 (2001).
167. A. Lupei, V. Lupei, L. Gheorghe, L. Rogobete, E. Osiac, A. Petraru, "The nature of nonequivalent Nd³⁺ centers in CNGG and CLNGG," Optical Materials **16**, 403 (2001).
166. S. Georgescu, V. Lupei, A. Petraru, C. Hapenciuc, C. Florea, C. Naud, C. Porte, "Excited-State-Absorption in low concentrated Er: YAG crystals for pulsed and cw pumping," J. Luminescence **93**, 281 (2001).
165. V. Lupei, "Laser materials: relationship between materials and laser properties," Encyclopaedia of Materials: Science and Technology, Pergamon - Elsevier, Amst., New York, (2001), Article No. 1-1.1x-5.
164. V. Lupei, A. Lupei, N. Pavel, I. Shoji, T. Taira, A. Ikesue, "Laser emission under thermally-activated resonant pump in concentrated Nd:YAG ceramics," Appl. Phys. Lett. **79**, 590 (2001).

163. V. Lupei, A. Lupei, S. Georgescu, T. Taira, Y. Sato, A. Ikesue, "The effect of Nd concentration on the spectroscopic and emission decay properties of highly-doped Nd:YAG ceramics," *Phys. Rev. B* **64**, 092102 (2001).
162. V. Lupei, T. Taira, A. Lupei, N. Pavel, I. Shoji, A. Ikesue, "Spectroscopy and laser emission under hot band resonant pump in highly-doped Nd:YAG ceramics," *Opt. Commun.* **195**, 225 (2001).
161. V. Lupei, A. Lupei, N. Pavel, T. Taira, A. Ikesue, "Comparative investigation of spectroscopic and laser emission characteristics under direct 885-nm pump of concentrated Nd:YAG ceramics and crystals," *Appl. Phys. B* **73**, 757 (2001).
160. V. Lupei, N. Pavel, T. Taira, "Laser emission in highly doped Nd:YAG crystals under $^4F_{5/2}$ and $^4F_{3/2}$ pumping," *Opt. Lett.* **26**, 178 (2001).
159. I. Shoji, Y. Sato, S. Kurimura, V. Lupei, T. Taira, A. Ikesue, K. Yoshida, "Thermal birefringence in Nd:YAG ceramics," *OSA Trends in Optics and Photonics* **50**, 273 (2001).
158. V. Lupei, A. Lupei, S. Georgescu, B. Diaconescu, T. Taira, Y. Sato, S. Kurimura, A. Ikesue, "Spectroscopic properties of highly-doped Nd:YAG ceramics," *OSA Trends in Optics and Photonics* **56**, 281 (2001).
157. V. Lupei, T. Taira, N. Pavel, I. Shoji, A. Ikesue, "Laser emission under resonant pump in the emitting level of highly-doped Nd materials," *OSA Trends in Optics and Photonics* **56**, 559 (2001).
156. V. Lupei, T. Taira, N. Pavel, I. Shoji, A. Ikesue, "Laser emission under resonant pump into the emitting level of highly-doped Nd Materials," *OSA Trends in Optics and Photonics* **56**, 559 (2001).
155. V. Lupei, A. Lupei, S. Georgescu, B. Diaconescu, T. Taira, Y. Sato, S. Kurimura, A. Ikesue, "Spectroscopic properties of highly-doped Nd:YAG ceramics," *OSA Trends in Optics and Photonics* **56**, 563 (2001).
155. V. Lupei, A. Lupei, "Emission dynamics of $^4F_{3/2}$ level of Nd^{3+} in YAG at low pump intensities," *Phys. Rev. B: Condens. Matter* **61**, 8087 (2000).
154. L. Gheorghe, M. Petrache, V. Lupei, "Preparation, growth and characterization of Nd-doped calcium lithium niobium gallium garnet (Nd^{3+} :CLNGG) single crystals," *J. Cryst. Growth* **220**, 121 (2000).
153. A. Lupei, V. Lupei, C. Presura, V. N. Enaki, A. Petraru, "Electron-phonon coupling effects on Yb^{3+} spectra in several laser crystals," *J. Phys.: Condens. Matter* **11**, 3769 (1999).
152. V. Lupei, A. Lupei, G. Boulon, "Dopant distribution and energy transfer processes in crystals," *Spectrochimica Acta A* **55**, 783 (1999).
151. A. Lupei, V. Lupei, V. N. Enaki, C. Presura, A. Petraru, "Electron-photon coupling for heavy RE^{3+} ions in crystals," *Spectrochimica Acta A* **55**, 773 (1999).
150. S. Georgescu, V. Lupei, C. Hapenciuc, "Giant pulse generation in 3 μ m erbium lasers," *Balkan Phys. Lett.* **7**, 62 (1999).
149. S. Georgescu, V. Lupei, and C. Hapenciuc, "On the efficiency of Q-switched 3- μ m erbium laser," *Rom. J. Phys.* **43**, 147 (1998).
148. V. Lupei, A. Lupei and G. Boulon, "High resolution spectroscopic effects in sensitised emission of laser crystals," *Rom. J. Phys.* **43**, 79 (1998).
147. V. Lupei, E. Osiac, G. Huber, E. Heumann, T. Sandrock, "Sensitised photon avalanche processes in rare earth-doped active media," *Rom. J. Phys.* **43**, 57 (1998).
146. A. Lupei, V. Lupei, E. Osiac, A. Petraru, "Structural effects in the optical spectra of RE^{3+} in YAG," *Rom. J. Phys.* **43**, 345 (1998).
145. T. Dascalu, V. Lupei, H. Weber, "Nd:YAG laser cw pumped and passively Q-switched by Cr^{4+} :YAG," *Rom. J. Phys.* **43**, 79 (1998).
144. V. Lupei, "Sensitised photon avalanche," *Spectrochimica Acta A* **54**, 1615 (1998).

143. A. Lupei, V. Enaki, V. Lupei, C. Presura, A. Petraru, "Resonant electron-photon coupling of Yb³⁺ in YAG," J. Alloys and Compounds **275-277**, 196 (1998).
142. V. Lupei, E. Osiac, T. Sandrock, E. Heumann, G. Huber, "Excited state dynamics in photon avalanche processes," J. Lumin. **76**, 441 (1998).
141. A. Lupei, V. Lupei, E. Osiac, "Spectral and dynamical effects of octahedral impurities on RE³⁺ in garnets," J. Phys.: Cond. Matter **10**, 9701 (1998).
140. A. Dinca, P.T. Miclea, V. Lupei, T. Skettrup, M. P. Dinca, "Multiple solutions provided by analytical synthesis in admittance matching application to dichroic mirrors," J. Modern Optics **45**, 605 (1998).
139. S. Georgescu, V. Lupei, T. J. Glynn, R. J. Sherlock, "Intensity pump effects in the kinetics of ⁴I_{11/2} level in ErAG," Optics Communications **155**, 61 (1998).
138. A. Dinca, V. Lupei, M. P. Dinca, "Design of inhomogeneous layers with finite optical thickness," Balkan Phys. Lett. **5**, 1407 (1998).
137. A. Dinca, P. T. Miclea, V. Lupei, M. P. Dinca, "Regularities among the solutions for two-side optical admittance matching," Balkan Phys. Lett. **5**, 1403 (1998).
136. S. Georgescu, V. Lupei, "Q-switch regime of 3- μ m Er:YAG lasers," IEEE J. Quantum Electronics **34**, 6 (1998).
135. A. Lupei, C. Stoicescu, V. Lupei, "X-ray and spectral characteristics of garnet defects," J. Crystal Growth **174**, 207 (1997).
134. V. Lupei, A. Lupei, G. Boulon, "The effects of sensitization on the activator emission in laser crystals," J. of Luminescence **72/74**, 948 (1997).
133. A. Lupei, V. Lupei, "Resonance between electronic and vibronic levels of Tm³⁺ in YAG," J. Phys. Cond. Matter **9**, 2807 (1997).
132. V. Lupei, A. Lupei, G. Boulon, "On the Characteristics of Sensitized Emission in Laser Crystals," Phys. Rev. B, Condens. Matter. **53**, 14818 (1996).
131. N. Pavel, T. Dascalu, V. Lupei, "Variable Reflectivity Mirror Unstable Resonator with Deformable Mirror Thermal Compensation," Optics Commun. **123**, 115 (1996).
130. N. Pavel, T. Dascalu, V. Lupei, "Stable Resonators for Fundamental Mode Operation," Optical Engineering **35**, 1239 (1996).
129. V. Lupei, S. Georgescu, "Erbium Three-Micron Laser as an Upconversion System," Optical Engineering **35**, 1265 (1996).
128. A. Lupei, V. Lupei and C. Tiseanu, "Spectroscopic data on 2 micron laser systems," Optical Engineering **35**, 1258 (1996).
127. V. Lupei, A. Lupei, "Quantum Efficiency of Emission and Heating Effects in Nd Lasers," Optical Engineering **35**, 1252 (1996).
126. S. Georgescu, V. Lupei, R. J. Sherlock, T. J. Glynn, "Population dynamics of the three-micron emitting level of Er³⁺ in YAlO₃," J. Appl. Phys. **80**, 6610 (1996).
125. V. Lupei, A. Lupei, A. Petraru, "Fast energy transfer in the sensitization of Tm laser active systems," Roum. J. Phys. **41**, 399 (1996).
124. A. Dinca, V. Lupei, "Dichroic mirror design by complete admittance matching," Optical Engineering **35**, 1284 (1996).
123. A. Dinca, M. E. Trifan, V. Lupei, M. P. Dinca, "Variable reflectivity mirrors with all profiled layers," Optics Communications **127**, 176 (1996).
122. A. Dinca, M.E. Trifan, V. Lupei, M.P. Dinca, "Admittance-matched interference polarizers," Journal of Modern Optics **43**, 1615 (1996).
121. T. Dascalu, G. Philipps, H. Weber, N. Pavel, T. Beck, V. Lupei, "Investigation on Nd: YAG laser, passive Q-switch, externally controlled, quasi-continuous or continuous pumped," Optical Engineering **35**, 1247 (1996).

120. N. Pavel, T. Dascalu, V. Lupei ,“Positive branch unstable resonators with thermal lens compensation,” Optics & Laser Technology **28**, 451 (1996).
119. V. Lupei, S. Hartung, G. Huber, “Excited state absorption of Fe³⁺ in garnet crystals,” Rad. Effects and Defects in Solids **136**, 19 (1995).
118. S. Georgescu, V. Lupei, Th. J. Glynn, R. Sherlock, “Thermal effects on the quantum efficiency of 3-micron Erbium lasers,” Rad. Effects and Defects in Solids **136**, 23 (1995).
117. A. Lupei, C. Tiseanu, V. Lupei, “Multisite structure of Nd³⁺ in YAG,” Rad. Effects and Defects in Solids **136**, 37 (1995).
116. V. Lupei, “New symmetry properties of the cubic rare-earth centers in crystals,”Rad. Effects and Defects in Solids **136**, 127 (1995).
115. V. Lupei, A. Lupei, C. Tiseanu, S. Georgescu, C. Stoicescu, P. M. Nanau, “High resolution optical spectroscopy of Nd in YAG - a test for structural and distribution models,” Phys. Rev. B. Condens. Mat. **51**, 8 (1995).
114. C. Tiseanu, A. Lupei, V. Lupei, “Energy levels of Tm³⁺ in YAG,” J. Phys.: Cond. Matter. **7**, 8477 (1995).
113. V. Lupei, A. Lupei, I. Ursu, “Intrinsic Limitations of Emission Quantum Efficiency of YAG:Nd,” Rom. J. of Phys. **7**, 595 (1995).
112. V. Lupei, “On the mechanism of contrast in the cathodoluminescence imaging of laser crystals,” Rad. Effects and Defects in Solids **136**, 15 (1995).
111. N. Pavel, T. Dascalu, R. Florescu, V. Lupei, “Output beam characteristics of optical resonators with variable reflectivity mirrors,” Balkan Phys. Lett. **2**, 264 (1994).
110. A. Lupei, V. Lupei, S. Grecu, C. Tiseanu, G. Boulon, “Crystal field levels of Tm³⁺ in GGG,” J. ApplPhys. **75**, 4652 (1994).
109. V. Lupei, A. Lupei, S. Bonea, P. M. Nanau, M. Bolog, “Energy transfer from Fe³⁺ to rare earth ions YAG and the problem of sensitisation of laser emission,” J. de Physique IV **4**, 505 (1994).
108. V. Lupei, A. Lupei, G. Boulon, “Multisite structure of optical spectra of activators in garnet crystals,” J. de Physique IV **4**, 407 (1994).
107. V. Lupei, “On the wavelength range and quantum efficiency of three-micron laser emission,” J. de Physique IV **4**, 321 (1994).
106. V. Lupei, M. J. Elejalde, A. Bremer, G. Boulon, “Spectroscopic properties of Fe³⁺ in GGG and the effect in codoping with rare earths,” J. de Physique IV **4**, 329 (1994).
105. A. Knupfer, V. Ostroumov, E. Heumann, G. Huber, V. Lupei, “Mechanisms of up-conversion excitation of blue emission of YAG:Tm,Yb,” J. de Physique IV **4**, 501 (1994).
104. A. Knupfer, E. Heumann, V. Ostroumov, G. Huber, V. Lupei, B. Chai, “Two-step pumped YLF:Tm blue up-conversion laser,” J. de Physique IV **4**, 403 (1994), Reprinted in “Selected Papers on Upconversion Lasers,” Ed. T. R. Gosnell, SPIE Press, Bellingham, N. J.,2000, p.181.
103. V. Lupei, G. Boulon, A. Lupei, M. J. Elejalde, A. Brenier, C. Pedrini, “Spectrally selective energy transfer from Fe³⁺ in garnet lattices,” J. of Luminesc. **60/61**, 237 (1994).
102. S. Georgescu, V. Lupei, T. J. Glynn, R. Sherlock, “Spectroscopic determination of the "Figures of merit" for three-micron Er³⁺ lasers,” J. of Luminesc. **60/61**, 241 (1994).
101. S. Georgescu, T. J. Glynn, R. Sherlock, V. Lupei, “Concentration quenching of the ⁴I_{9/2} level of Er³⁺ in laser crystals,” Optics Commun. **106**, 75 (1994).
100. T. Dascalu, V. Lupei, N. Pavel, “A new laser regime for high energy Nd:YAG lasers,” J. de Physique IV **4**, 171 (1994).
99. T. Dascalu, N. Pavel, V. Lupei, “Optical resonator for long pulse Nd:YAG laser with thermal effects,” J. de Physique IV **4**, 73 (1994).
98. T. Dascalu, V. Lupei, N. Pavel, “Investigation of welding depth with overlapping laser pulse,” J. de Physique IV **4**, 179 (1994).

97. V. Lupei, G. Boulon, A. Lupei, M. J. Elejalde, A. Brenier, C. Pedrini, "Energy transfer from tetrahedral Fe^{3+} to Tm^{3+} in garnets," *Phys. Rev. B. Condens. Mat.* **49**, 7076 (1994).
96. V. Iov, V. Lupei, C. Stoicescu, "Cathodoluminescence emission as a control technique of laser crystal growth technology," *Balkan Phys Lett.* **2**, 43 (1994).
95. A. Dinca, V. Lupei, "Admittance matching design for thin film polarizers," *Balkan Phys. Lett.* **2**, 1377 (1994).
94. V. Lupei, L. Lou, G. Boulon, A. Lupei, "On the origin of the satellite structure of luminescent spectra of Cr^{3+} in YAG," *J. Phys. Condens. Mat.* **5**, L35 (1993).
93. V. Lupei, S. Georgescu, V. Florea, "On the dynamics of population inversion for three-micron Er^{3+} lasers", *IEEE J. of Quantum Electron* **29**, 426 (1993).
92. A. Lupei, C. Tiseanu, V. Lupei, "Correlation between spectral and structural data of YAG:Tm^{3+} and $\text{YAG:Cr}^{3+}, \text{Tm}^{3+}$," *Phys. Rev. B. Condens. Mat.* **47**, 14084 (1993).
91. A. Dinca, M. Ionita-Manzatu, V. Lupei, "Thin film polarizers for 1.064 microns," *Roum. Reports in Phys.* **45**, 391 (1993).
90. V. Lupei, L. Lou, G. Boulon, A. Lupei, C. Tiseanu, "Static and dynamic luminescence effects of $\text{Cr}^{3+} - \text{Tm}^{3+}$ pairs in YAG," *J. de Physique I*, **3**, 1245 (1993).
89. V. Lupei, A. Lupei, S. Georgescu, I. Ursu, "Fundamental processes in the laser emission of solid state active crystals," *Roum. Reports in Phys.*, **44**, 103 (1992).
88. I. Ursu, V. Lupei, A. Lupei, "Application of Uranium magnetic resonance for safe disposal of radioactive wastes," *International Centre for Theoretical Physics Trieste Rept.* IC/92/366 (1992).
87. T. Dascalu, V. Florea, V. Lupei, V. Dascalu, "A simple approach for Nd:YAG lasers with long pulse generation," *Rom. Reports in Phys.*, **37**, 473 (1992).
86. V. Ionita-Manzatu, N. Pavel, V. Lupei, "Solid state lasers with thermally induced lens", *Rom. Repts. in Phys.*, **44**, 139 (1992).
85. A. Lupei, V. Lupei, S. Georgescu, "High resolution spectroscopy of Nd^{3+} in YAIO_3 ", *J. Phys. Condens. Mat.* **4**, L221 (1992).
84. V. Lupei, S. Georgescu, V. Florea, "The effect of thermal level lifetime in three-micron laser emission in Er - doped crystals," *Optics Commun.* **92**, 67 (1992)
83. E. Carbunescu, I. Iova, V. Ionita-Manzatu, V. Lupei, "Optical bistability in silicon," *Rom. Reports in Phys.* **44**, 161 (1992).
82. V. Lupei, T. Dascalu, V. Florea, V. Niculescu, M. Mogos, "An automatically controlled Nd:YAG laser with variable pulse width," *Opt. and Laser Technol.*, **23**, 155 (1991).
81. V. Lupei, "Laser processes and energy transfers," *J. Lumin.*, **48/49**, 1937 (1991)
80. V. Lupei, "Spectroscopic and stimulated emission properties of Er^{3+} doped crystals for three micron lasers," *J. de Physique IV*, **1**, 395 (1991).
79. S. Georgescu, V. Lupei, A. Lupei, V. I. Zhekov, T. M. Murina, A. M. Prokhorov, "Concentration effects on the up-conversion from $^4\text{I}_{13/2}$ level of Er^{3+} in YAG," *Opt. Commun.*, **81**, 186 (1991).
78. V. Lupei, A. Lupei, S. Georgescu, I. Ursu, "Effects of near-neighbor pairs on energy transfer in YAG:Nd^{3+} ," *Appl. Phys. Lett.*, **59**, 905 (1991).
77. V. I. Zhekov, T. M. Murina, A. M. Prokhorov, S. Georgescu, V. Lupei, A. Lupei, "Disordered static transport of energy from the $^4\text{S}_{3/2}$ level of Er in YAG and YAIO_3 ," *Sov. Phys. Lebedev Inst. Rept.*, **9**, 13 (1991).
76. I. Ursu, V. Lupei, A. Lupei, S. Georgescu, "Acceptor distribution and energy transfer processes," *Rev. Roum. Phys.*, **36**, 639 (1991).
75. I. Ursu, V. Lupei, D. Toma, V. P. Salimov, D. D. Dryutchenko, P. I. Antonov, "Crystal growth of profiled crystals in micro gravity," *Rev. Roum. Phys.*, **35**, 161 (1990).
74. V. Florea, T. Dascalu, A. Lupei, V. Lupei, "Studies of laser emission of F_2^- color centers in LiF," *Stud. Cerc. Fiz.* **42**, 511 (1990).

73. A. Lupei, V. Lupei, S. Georgescu, I. Ursu, V. I. Zhekov, T. M. Murina, A. M. Prokhorov, "Many body energy transfer processes between Er^{3+} ions in YAG," Phys. Rev. B **41**, 10923 (1990).
72. V. I. Zhekov, T. M. Murina, A. M. Prokhorov, M. I. Studenikin, S. Georgescu, A. Lupei, V. Lupei, "Nonradiative energy transfer of excitation in crystals by the interaction of three optically active centers," J.E.T.P. Letters **52**, 670 (1990).
71. V. G. Babadjanyan, S. Georgescu, C. Ionescu, R. B. Kostanyan, V. Lupei, T. V. Sanamyan, V. R. Nikogosyan, "Optical properties of LiNbO_3 crystals doped with Er^{3+} ," Izv. A. N. Armenii, Fizika, **95**, 356 (1990), Sov. J. of Contemporary Phys. **25**, 356 (1990).
70. A. Lupei, V. Florea, T. Dascalu, V. Lupei, "Saturation mechanism of F_2^- in LiF", Optics Commun. **79**, 5 (1990).
69. V. Lupei, A. Lupei, S. Georgescu, W. M. Yen, "Effects of energy transfer on quantum efficiency of YAG: Nd," J. Appl. Phys. **66**, 3792 (1989).
68. I. Ursu, A. Lupei, S. Georgescu, V. Lupei, A. M. Prokhorov, V. I. Zhekov, "Energy transfer characteristics of $^4\text{S}_{3/2}$ level of Er^{3+} in YAG," Optics Commun. **72**, 209 (1989).
67. I. Ursu, A. Lupei, S. Georgescu, V. Lupei, A. M. Prokhorov, V. I. Zhekov, T. M. Murina, "Temperature effects on the $^4\text{S}_{3/2}$ luminescence of Er in YAG," Rev. Roum. Phys., **34**, 645 (1989).
66. I. Ursu, A. Lupei, S. Georgescu, V. Lupei, A. M. Prokhorov, V. I. Zhekov, "Quenching processes in the $^4\text{S}_{3/2}$ luminescence of Er^{3+} in YAG," Rev. Roum. Phys., **34**, 829 (1989).
65. V. Lupei, D. Toma, "The control of the shape of the profiled crystals grown by capillary fed in microgravity conditions," Rev. Roum. Phys., **33**, 1105 (1988).
64. W. M. Yen, V. Lupei, A. Lupei, "Pair effects in the kinetics and efficiency of Nd^{3+} luminescence in YAG," Rev. Roum. Phys., **33**, 1007 (1988).
63. A. M. Prokhorov, V. I. Zhekov, V. Lupei, S. Georgescu, A. Lupei, "Luminescence quenching of the $^4\text{S}_{3/2}$ Er^{3+} level in YAG," Rev. Roum. Phys., **33**, 843 (1988).
62. T. T. Basiev, S. Georgescu, V. I. Zhekov, V. Lupei, A. M. Prokhorov, "Features of luminescence quenching with temperature in YAG: Er," Sov. J. Quant. Electron **18**, 1123 (1988) (Kvant. Elektr., **15**, 1800 (1988)).
61. I. Ursu, V. Lupei, "Micro processing with solid state lasers," (in Romanian) (review paper), Stud. Cerc. Fiz., **40**, 529 (1988).
60. I. Ursu, A. Lupei, V. Lupei, S. Georgescu, "Application of lasers in solid state spectroscopy," (in Romanian) (review paper), Stud. Cerc. Fiz., **40**, 437 (1988).
59. A. Lupei, V. Lupei, S. Georgescu, W. M. Yen, "Mechanism of energy transfer between Nd^{3+} ions in YAG," J. Lumin., **39**, 35 (1987).
58. I. Ursu, V. Lupei, A. Lupei, W. M. Yen, "Anomalous decay of Nd^{3+} ion luminescence in YAG," Rev. Roum. Phys., **32**, 1003 (1987).
57. E. Ristici, O. Radulescu, I. Voicu, D. Hurezeanu, Yu. S. Kuzminov, Yu Jin-Liang, "BNN device for CW YAG:Nd frequency doubling," Rev. Roum. Phys. **32**, 919 (1987).
56. I. Ursu, V. Lupei, "Magnetic resonance studies of some uranium compounds," (review paper), Magn. Res. Rev. **10**, 253 (1986).
55. V. I. Zhekov, T. M. Murina, A. M. Prokhorov, S. Georgescu, V. Lupei, I. Ursu, "Cooperative processes in YAG: Er crystals," Sov. J. Quant. Electron, **16**, 274 (1986) (Kvant. Elektron., **16**, 274 (1986)).
54. V. Lupei, A. Lupei, S. Georgescu, "Energy transfer between Nd^{3+} ions in YAG," Opt. Commun., **60**, 59 (1986).
53. A. Lupei, V. Lupei, C. Ionescu, H. G. Tang, M. T. Chen, "Spectroscopy of Ti^{3+} in Al_2O_3 ," Opt. Commun., **59**, 36 (1986).

52. S. Georgescu, V. Lupei, I. Ursu, V. I. Zhekov, V. A. Lobachev, T. M. Murina, A. M. Prokhorov, "The role of cross - relaxation mechanisms in the quasi stationary generation regime of the YAG: Er laser," Rev. Roum. Phys., **31**, 857 (1986).
51. S. Georgescu, V. I. Zhekov, V. Lupei, "The probabilities of non - radiative processes in YAG:Er (in Russian)," IOFAN Moscow Preprint series, **No. 297** (1985).
50. A. Lupei, V. Lupei, I. Ursu, "Co - doping effects on EPR of U^{5+} in LiF," J. Phys. C: Sol. St. Phys. **18**, 6099 (1985).
49. V. Lupei, D. Toma, D. Prunariu, I. Brandus, A. Popa, P. P. Antonov, "The results of research on shape control by capillary feed for Germanium crystals obtained in the project Capillary "(in Russian)," Salyut 6 - Soyuz Cosmic technologies," Ed. Nauka Moscow 1985, p. 133.
48. A. Lupei, V. Lupei, I. Ursu, "On the vibrational structure of U^{6+} centers in LiF," Rev. Roum. Phys. **30**, 257 (1985).
47. I. Ursu, V. Lupei, "EPR of Uranium ions," (Invited Review paper), B. Magn. Res. **6**, 162-224 (1984).
46. I. Ursu, V. Lupei, "Magnetic resonance studies on Uranium compounds," B. Magn. Res. **5**, 136 (1983).
45. I. Ursu, V. Lupei, "Electronic structure of uranate centers in alkali fluorides," B. Magn. Res. **5**, 217 (1983).
44. V. Lupei, C. Stoicescu, I. Ursu, "Electron paramagnetic resonance in cubic gamma - 8 quartets," B. Magn. Res. **5**, 206 (1983.)
43. A. Lupei, V. Lupei, "The nature of luminescent transitions of the main U^{6+} center in NaF," Rev. Roum. Phys. **28**, 367 (1983).
42. V. Lupei, "The hyperfine interaction of trivalent uranium and the nuclear magnetic of ^{235}U ," J. Phys. C: Sol. St. Phys. **16**, 6627 (1983).
41. V. Lupei, "EPR of trivalent uranium in alkali - compensated SrF_2 ," J. Phys. C: Sol. St. Phys. **16**, 6623 (1983).
40. V. Lupei, A. Lupei, V. Ionita-Manzatu, S. Georgescu, F. Domsa, "Combined mechanical - color center passive Q-switching of neodymium lasers," Opt. Commun. **48**, 203 (1983).
39. A. Lupei, V. Lupei, F. Domsa, S. Georgescu, V. Ionita-Manzatu, "Passive Q-switch with color centers for neodymium lasers," Rev. Roum. Phys. **28**, 265 (1983).
38. I. Ursu, I. Apostol, D. Barbulescu, V. Lupei, I. N. Mihailescu, Al. Popa, A. M. Prokhorov, N. I. Chapliev, V. I. Konov, "On the influence of the surface conditions on air plasma formation near materials irradiated by microsecond TEA- CO_2 laser pulses," Rev. Roum. Phys. **28**, 351 (1983).
37. V. Lupei, I. Ursu, "Research on laser crystals and their applications," Rev. Roum. Phys. **27**, 537 (1982).
36. A. Lupei, V. Lupei, I. Ursu, "Luminescence and EPR of Uranium - activated sodium fluoride", J. Phys. C: Sol. St. Phys. **15**, 5489 (1982).
35. I. Brandus, V. Lupei, "Physics experiments in the cosmic flight programme of the Romanian astronaut (in Romanian) (review paper)," Stud. Cerc. Fiz. **34**, 539 (1982).
34. V. Lupei, C. Stoicescu, "EPR of alkali - compensated U^{3+} in fluoride," B. Magn. Res. **2**, 179 (1981).
33. I. Ursu, A. Lupei, V. Lupei, "Structural information on uranium ions in LiF from EPR data," B. Magn. Res. **2**, 191 (1981).
32. V. Lupei, "EPR of two new tetragonal U^{3+} centers in SrF_2 ," B. Magn. Res. **2**, 180 (1981).
31. C. Ciucu, S. Georgescu, V. Lupei, "Energy levels and free - ion parameters for $YAlO_3: Nd$," Rev. Roum. Phys., **26**, 169 (1981).
30. V. Lupei, C. Stoicescu, "EPR hyperfine structure of the trigonal U^{4+} ," J. Phys. C: Sol. St. Phys. **12**, 4585 (1979).

29. V. Lupei, "EPR of cubic Pr^{3+} in fluorite," J. Phys. C.: Sol. St. Phys. **12**, L45 (1979).
28. V. Lupei, A. Lupei, "On the nature of U^{5+} centers in LiF," Phys. St. Sol. (b) **94**, 301 (1979).
27. V. Lupei, A. Lupei, "A $5f^1$ ion in non - octahedral symmetry," Phys. St. Sol. (b) **95**, K 69 (1979).
26. I. Ursu, V. Lupei, A. Lupei, I. Voicu, "Use of hyperfine structure in determination of uranium isotopic abundance," Rev. Roum. Phys. **24**, 229 (1979).
25. A. Lupei, V. Lupei, "EPR and luminescence studies on high valence uranium centers in CaF_2 ," J. Phys. C: Sol. St. Phys. **12**, 1125 (1979).
24. S. Georgescu, H. Totia, F. Domsa, V. Lupei, "Phase spectroscopy: an improvement to the chronospectroscopic method," J. Phys. E: Sci. Instrum. **12**, 473 (1979).
23. V. Lupei, A. Lupei, "EPR of a rhombic U^{5+} in air heated CaF_2 ," Rev. Roum. Phys. **23**, 363 (1978).
22. V. Lupei, C. Stoicescu, "Electron Paramagnetic Resonance of U^{3+} in cubic sites of Calcium Fluoride," Rev. Roum. Phys. **23**, 353 (1978).
21. I. Ursu, V. Lupei, A. Lupei, "High valency uranium in fluorite," Rev. Roum. Phys. **23**, 673 (1978).
20. A. Lupei, V. Lupei, "Low symmetry U^{5+} centers in CaF_2 ," J. Phys. C: Sol. St. Phys. **11**, 2861 (1978).
19. V. Lupei, C. Stoicescu, I. Ursu, "An orthorhombic U^{3+} center in CaF_2 ," Rev. Roum. Phys. **22**, 549. (1977).
18. V. Lupei, A. Lupei, S. Georgescu, "EPR of U^{5+} in alkali fluorides with a new charge compensation," Phys. St. Sol. (b) **83**, 71 (1977).
17. V. Lupei, A. Lupei, "EPR of a $5f^1$ ion in CaF_2 ," Rev. Roum. Phys. **22**, 869 (1977).
16. A. Lupei, V. Lupei, "Hyperfine parameters for a trigonal U^{5+} center in CaF_2 ," Rev. Roum. Phys. **22**, 1005 (1977).
15. V. Lupei, A. Lupei, I. Ursu, "Pentavalent Uranium in CaF_2 ," J. Phys. C: Sol. St. Phys. **10**, 9587 (1977).
14. V. Lupei, A. Lupei, S. Georgescu, "EPR of U^{5+} center in KF," Rev. Roum. Phys. **21**, 907 (1976).
13. V. Lupei, S. Georgescu, I. Ursu, "EPR of U^{5+} ions in x - irradiated NaF - U," Rev. Roum. Phys. **21**, 25 (1976).
12. V. Lupei, I. Voicu, "EPR of Mn^{4+} in LiF:U, Mn," J. Phys. Chem. Sol. **37**, 1093 (1976).
11. V. Lupei, C. Stoicescu, I. Ursu, "A new tetragonal center of U^{3+} in CaF_2 ," J. Phys. C: Sol. St. Phys. **9**, L317 (1976).
10. V. Lupei, A. Lupei, S. Georgescu, I. Ursu, "The hyperfine structure of U^{5+} in NaF and LiF single crystals," J. Phys. C.: Sol. St. Phys. **9**, 2619 (1976).
9. V. Lupei, A. Lupei, A. Stefanescu, F. Domsa, "Angular variation of the forbidden transitions in the EPR of Mn^{2+} in NH_4Cl ," J. Magn. Res. **19**, 337 (1975).
8. A. Lupei, V. Lupei, A. Stefanescu, F. Domsa, "Intensity of the hyperfine lines of Mn^{2+} in NH_4Cl ," Rev. Roum. Phys. **20**, 59 (1975).
7. V. Lupei, A. Lupei, I. Ursu, "Further EPR studies of forbidden hyperfine transitions of Mn^{2+} in calcite," Phys. Rev. B **6**, 4125 (1972).
6. V. Lupei, I. Ursu, "Forbidden hyperfine transitions for Mn^{2+} in dolomite and magnezite," Rev. Roum. Phys. **15**, 627 (1970).
5. I. Ursu, A. Lupei, V. Lupei, "An $I = 3/2$ ESR center in u. v. - irradiated realgar powder," Rev. Roum. Phys. **15**, 569 (1970).
4. V. Lupei, A. Lupei, I. Ursu, "Spin Hamiltonian description of the ESR spectra of the ${}^6\text{S}_{5/2}$ ions in trigonal crystalline fields," Rev. Roum. Phys. **13**, 327 (1968).

3. I. Ursu, V. Lupei, S. V. Nistor, "Electron spin resonance study of irradiated semiconductors," Atomic Energy Review **5**, 97 (1967), (review paper).
2. I. Ursu, V. Lupei, "Electron spin resonance of Mn^{2+} in polycrystalline As_2S_3 ," Rev. Roum. Phys., **11**, 165 (1966).
1. I. Ursu, V. Lupei, A. Lupei, "Forbidden hyperfine transitions in the ESR spectra of Mn^{2+} in calcite", Rev. Roum. Phys., **11**, 875 (1966).