

## Publications

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*Article*

**Terahertz Radiation in a Parallel Metal Plate Waveguide Partially Filled with a Nonlinear Optical Crystal [Терагерцовое излучение в волноводе с параллельными металлическими пластинами, частично заполненном нелинейно-оптическим кристаллом]**

A. S. Nikoghosyan, V. R. Tadevosyan

Radiophysics and Quantum Electronics (Известия вузов. Радиофизика) 2025 823-832

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*Article*

**Broadband TeraHertz waveguide partially filled with a nonlinear crystal**

A.S. Nikoghosyan, V.R. Tadevosyan

International Conference on Microwave & THz Technologies, Wireless Communications and OptoElectronics (IRPhE 2022)  
2023 22987026/ 56-59

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*Article*

**Features of a THz pulse generated in the metallic waveguides partially filled with nonlinear crystals**

A.S. Nikoghosyan, V.R. Tadevosyan, G.N. Goltsman, S.V. Antipov

Journal of Physics: Conference Series 2023 012013

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**Broadband TeraHertz waveguide partially filled with a nonlinear crystal**

A. S. Nikoghosyan, V. R. Tadevosyan

International Conference on Microwave & THz Technologies, Wireless Communications and OptoElectronics (IRPhE 2022)  
2023 Pages 56 - 59

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*Article*

**Critical Wavelength in the Metal Waveguide Partially Filled with Nonlinear Crystal**

A. S. Nikoghosyan, V. R. Tadevosyana, G. N. Goltsman, S. V. Antipov

Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 366–370

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*Article*

**КРИТИЧЕСКАЯ ДЛИНА ВОЛНЫ В ВОЛНОВОДЕ, ЧАСТИЧНО ЗАПОЛНЕННОМ НЕЛИНЕЙНЫМ КРИСТАЛЛОМ**

А.С. НИКОГОСЯН, В.Р. ТАТЕВОСЯН, Г.Н. ГОЛЬЦМАН, С.В. АНТИПОВ

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2021  
с.543–549

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*Article*

**ВЛИЯНИЕ ПОГЛОЩЕНИЯ НА ЭФФЕКТИВНОСТЬ ГЕНЕРАЦИИ ТЕРАГЕРЦОВОГО ИЗЛУЧЕНИЯ В МЕТАЛЛИЧЕСКОМ ВОЛНОВОДЕ, ЧАСТИЧНО ЗАПОЛНЕННОМ НЕЛИНЕЙНЫМ КРИСТАЛЛОМ**

**LiNbO<sub>3</sub>, DAST ИЛИ ZnTe**

А.С. НИКОГОСЯН, Р.М. МАРТИРОСЯН, А.А. АХУМЯН, А.О. МАКАРЯН, В.Р. ТАТЕВОСЯН, Г.Н. ГОЛЬЦМАН,  
С.В. АНТИПОВ  
Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2019  
128-137

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*Article***Optical Properties of Human Jawbone, Spongy Bone, and Human Bone Substitute Cerabone® in the Spectral Range 0.2 to 2.5 THz**

A.S. Nikoghosyan, J. Shen

AIP Conference Proceedings 2019 080001(1-3)

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*Article***Optical detection of femtosecond laser pulses in a ferromagnet as a result of its magnetization by the magnetic field of the laser pulse**

A. H. Makaryan, V. R. Tadevosyan, A. S. Nikoghosyan, T. S. Yezekyan, M. A. Kazaryan

Proceedings of SPIE - The International Society for Optical Engineering 2019 113222E(1-4)

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*Article***Terahertz nonlinear waveguide-antenna driven by a femtosecond laser**

A.S. Nikoghosyan, M.A. Kazaryan

Proceedings of SPIE - The International Society for Optical Engineering 2019 113222F(1-4)

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*Article***Simulation of the THz radiation in the tapered waveguide**

A.S. Nikoghosyan, Sh. Kh. Arakelyan, M. A. Kazaryan

Proceedings of SPIE - The International Society for Optical Engineering 2018 1061418(1-5)

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*Article***Effect of Absorption on The Efficiency of THz Radiation Generation in a Nonlinear Crystal Placed Into a Waveguide**

A.S. Nikoghosyan, R.M. Martirosyan, A.A. Hakhoumian, A.H. Makaryan, V.R.Tadevosyan, G.N. Goltsman,

S.V. Antipov

Armenian Journal of Physics 2018 257-262

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*Article***Efficient Ultrashort THz Pulse Generation in LiNbO<sub>3</sub>, ZnTe, GaSe and DAST Crystals**

A. S. Nikoghosyan, R. M. Martirosyan, A. A. Hakhoumian

Armenian Journal of Physics 2018 263-268

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*Article***Dielectric Anisotropy of Human Bone and CERABONE® in the Terahertz Spectral Range 0.2 to 2.5 THz**

A.S. Nikoghosyan, H. Ting, J. Shen, R.M.Martirosyan, M.A. Kazaryan, M.Yu.Tunyan, A.V. Papikyan,

A.A. Papikyan

Journal of Physics: Conference Series 2017 012005 pp.1 - 8

<http://iopscience.iop.org/journal/1742-6596>

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*Article***THz Spectroscopic Properties of Human Spongy Bone and Collagen in the Terahertz Spectral**

**Range 0.2 to 2.5 THz**

A.S. Nikoghosyan, H. Ting, J. Shen

SEMICONDUCTOR MICRO- AND NANO-ELECTRONICS. PROCEEDINGS OF THE ELEVENTH INTERNATIONAL CONFERENCE  
2017 173-175

<http://icsmn.yasu.am/11th%20ICSMN-Proceedings.pdf>

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*Article*

**Optical Properties of Human Jawbone and Human Bone Substitute Cerabone® in the Terahertz Range**

A.S. Nikoghosyan, R.M. Martirosyan, H. Ting, J. Shen, M. Yu. Tunyan, A. V. Papikyan, A. A. Papikyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2016 pp. 256-264

<http://www.springer.com/physics/particle+and+nuclear+physics/journal/11958>

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*Article*

**Dielectric anisotropy of human bone in spectral range 0.2 to 2.5 THz**

A.S. Nikoghosyan, T. He, J. Shen, R.M. Martirosyan

PROCEEDINGS of the International Conference on "Microwave and THz Technologies, Photonics and Wireless Communications"

2016 pp. 41 - 44

<http://irphe.asj-oa.am/93/1/Proceedings-IRPhE-2016.pdf>

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*Article*

**Terahertz Waves Propagation in a LiNbO<sub>3</sub> Wedge Antenna**

A.S. Nikoghosyan, Sh. Kh. Arakelyan

PROCEEDINGS of the International Conference on "Microwave and THz Technologies, Photonics and Wireless Communications"

2016 53 - 56

<http://irphe.asj-oa.am/93/1/Proceedings-IRPhE-2016.pdf>

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*Article*

**ОПТИЧЕСКИЕ СВОЙСТВА КОСТНОЙ ТКАНИ ЧЕЛЮСТИ ЧЕЛОВЕКА И ЗАМЕНИТЕЛЯ КОСТНОЙ ТКАНИ СЕРАБОН (CERABONE®) В ТЕРАГЕРЦОВОМ ДИАПАЗОНЕ**

А.С. НИКОГОСЯН, Р.М. МАРТИРОСЯН, J. SHEN, H. TING, М.Ю. ТУНЯН, А.В. ПАПИКЯН, А.А. ПАПИКЯН

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2016  
с.346-356

<http://www.flib.sci.am/eng/Fizika/Frame.html>

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*Article*

**Dielectric Anisotropy of Human Bone in THz Range**

A.S. Nikoghosyan, T. He, J. Shen, R.M. Martirosyan, M.A. Kazaryan, I.N. Feofanov, V.I. Sachkov

ЛАЗЕРНО-ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В МЕДИЦИНЕ, БИОЛОГИИ, ГЕОЭКОЛОГИИ И ТРАНСПОРТЕ

2016 10

<https://elibrary.ru/item.asp?id=25871913>

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**Optical Properties of Human Jawbone and CERABONE® in the Terahertz Range**

A.S. Nikoghosyan, T. He, J. Shen, R.M. Martirosyan, M.Yu. Tunyan, A.V. Papikyan, A.A. Papikyan

*Article*

**LiNbO<sub>3</sub> КЛИНООБРАЗНАЯ ТГц АНТЕННА, ЧАСТИЧНО ЗАПОЛНЯЮЩАЯ МЕТАЛЛИЧЕСКИЙ ВОЛНОВОД**

A.C. НИКОГОСЯН

International Scientific Journal for Alternative Energy and Ecology 2015 87-91

<http://www.isjaee.com/jour/article/view/31>

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*Article*

**Conversion of short optical pulses to terahertz radiation in a nonlinear medium: Experiment and theory**

A.S. Nikoghosyan, R.A. Dudley, N. N. Zinov'ev, J. M. Chamberlain

Physical Review B 2007 235114-16

<http://journals.aps.org/prb/>

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*Conference*

**Optical properties of human jawbone, spongy bone and human bone substitute CERABONE in spectral range from 0.2 to 2.5 THz**

A.S. Nikoghosyan, J. Shen

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*Conference*

**Effect of attenuation on the efficiency of THz radiation generation in a nonlinear crystal integrated into a waveguide**

A.S. Nikoghosyan, R.M. Martirosyan, A.A. Hakhoumian, A.O. Makaryan, V.R. Tadevosyan, G.N. Goltsman,

S.V. Antipov

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*Conference*

**High Conversion Efficiency in a System "Nonlinear-Optical Crystal Partially Filling the Cross Section of a Rectangular Waveguide**

A.S. Nikoghosyan

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*Conference*

**Physical Properties of Human Jawbone, Spongy Bone, Collagen and Cerabone® Bone Transplantation Material in Range of 0.2 to 2.5 THz**

A.S. Nikoghosyan, J. Shen, H. Ting

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