



## II. Research and supervision

### 1. Main research directions

- Antenna for microwave, millimeter-wave and terahertz wireless communication and optical sensors;
- Numerical methods and simulation techniques for multi-scale physics problems;
- Negative index materials, carbon nanotube-based and graphene-based devices for applications of energy collection, storage and conversion.

### 2. Research projects

<i>N<sup>o</sup></i>	<i>Project</i>	<i>Code &amp; Levels of Organization</i>	<i>Time</i>	<i>Role</i>	<i>Results</i>
1	MEMS/Nanophotonics-based sensors and biomedical applications	Ministry of Education under the <b>BK21 Program</b> by the <b>Korean Government (C6A1713)</b>	2006~2013	Assistant Researcher	Completed
2	Center for THz-Bio Application Systems	National Research Foundation of Korea Grant funded by the <b>Korean Government (2009-0083512)</b>	2009~2016	Assistant Researcher	Completed
3	Enhancement of Emission Efficiency for a Photoconductive Antenna in a Terahertz Pulsed System	Vietnam National Foundation of Science and Technology Development - <b>NAFOSTED (103.05-2013.75)</b>	2014~2016	Principal Investigator	Completed
4	Advanced metamaterials for enhanced THz generation in photomixers	Foundation for Science and Technology Development of <b>Ton Duc Thang University (FOSTECT.2015.BR.13)</b>	2015~2016	Principal Investigator	Completed
5	Ultra-thin metamaterial for enhanced THz generation in photoconductive antenna based photomixer	TWAS (The World Academy of Science) <b>16-184 RG_PHYS_AS_I</b>	2016~2018	Principal Investigator	Completed
6	Wideband and High-gain Circularly Polarized Fabry-Perot Antenna	Vietnam National Foundation of Science and Technology Development - <b>NAFOSTED (103.05-2016.37)</b>	2017~2019	Principal Investigator	Completed
7	Fiber-optic sensor technology for the detection of chemical species in liquid/gas environment using side-polished photonic crystal fiber	ASEAN-India Science & Technology Development Fund (AISTDF) <b>(IMRC/AISTDF/R&amp;D/P-13/2018)</b>	2018~2020	Co-Principal investigator ASEAN MS-2	Completed
8	Planar Antenna for Circular Polarization	Foundation for Science and Technology Development of <b>Ton Duc Thang University (FOSTECT.2019B.24)</b>	2020~2021	Principal Investigator	Completed
9	Reconfigurable Antenna with Metamaterial Structures for ISM Band Applications	Vietnam National Foundation of Science and Technology Development - <b>NAFOSTED (102.04-2019.04)</b>	2019-2021	Principal Investigator	Ongoing

### 3. Supervision (Master, PhD)

<i>N<sup>o</sup></i>	<i>Full name of students</i>	<i>Name of thesis</i>	<i>Level/Institution</i>	<i>Intended defense date</i>
1	Nguyen Thi Thanh Kieu	Numerical study and modeling of nano plasmonic structure at the active area of THz photoconductive antennas	Master/ University of Science HCM City	Completed 2015
2	Le Thi Thanh Thuy Mai	A study of effect of the femtosecond laser pulse for terahertz generation enhancement using photoconductive antennas	Master / University of Science HCM City	Completed 2017
3	Đặng Thanh Cường	Reconfigurable CP Antenna using PIN and Varactor Diodes for ISM Band Applications	Master/Ton Duc Thang University	Completed 2019
4	Bui Cong Danh	Design of Frequency and Bandwidth Reconfigurable Antenna for Cognitive Radio Applications	Master/Ton Duc Thang University	Completed 2021

### III. International publications

#### 1. Scientific papers

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Journal</i>	<i>Vol/pages</i>	<i>Year</i>	<i>Rank</i>
1	M. Kim, <b>T. K. Nguyen</b> , I. Woo, H. Choo, and I. Park	Small broadband disk-loaded monopole antenna with a vertical ground plane	Microwave and Optical Technology Letters	49(6): 1401–1405	2007	SCIE
2	<b>T. K. Nguyen</b> , K. Lee, H. Choo, and I. Park	A compact spiral stripline loaded monopole antenna with a vertical ground plane	Microwave and Optical Technology Letters	50(1): 250–252	2008	SCIE
3	<b>T. K. Nguyen</b> , B. Kim, H. Choo, I. Park	Multiband dual spiral stripline-loaded monopole antenna	IEEE Antennas and Wireless Propagation Letters	8: 57–59	2009	SCIE
4	K. Han, <b>T. K. Nguyen</b> , I. Park and H. Han	Terahertz Yagi-Uda antenna for high input resistance	Journal of Infrared, Millimeter, and Terahertz Waves	31(4): 441–454	2010	SCI
5	I. Woo, <b>T. K. Nguyen</b> , H. Han, H. Lim, and I. Park	Four-leaf-clover-shaped antenna for a THz photomixer	Optics Express	18(18): 18532–18542	2010	SCI
6	<b>T. K. Nguyen</b> , H. Han, I. Park	Numerical study of a full-wavelength dipole antenna on a GaAs membrane structure at terahertz frequency	Journal of Infrared, Millimeter, and Terahertz Waves	32(5): 763–777	2011	SCI
7	<b>T. K. Nguyen</b> , H. Han, and I. Park	Full-wavelength dipole antenna on a hybrid GaAs membrane and Si lens for a terahertz photomixer	Journal of Infrared, Millimeter, and Terahertz Waves	33(3): 333–347	2011	SCI

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Journal</i>	<i>Vol/pages</i>	<i>Year</i>	<i>Rank</i>
8	<b>T. K. Nguyen</b> , T. A. Ho, H. Han, and I. Park	Numerical study of self-complementary antenna characteristics on substrate lenses at terahertz frequency	Journal of Infrared, Millimeter, and Terahertz Waves	33(11): 1123–1137	2012	SCI
9	<b>T. K. Nguyen</b> , T. A. Ho, H. Han, and I. Park	Full-wavelength dipole antenna on a GaAs membrane covered by a frequency selective surface for a terahertz photomixer	Progress in Electromagnetics Research	131: 441–455	2012	SCIE
10	<b>T. K. Nguyen</b> and I. Park	Effects of antenna design parameters on the characteristics of a terahertz photoconductive dipole antenna	Progress in Electromagnetics Research M	28: 129–143	2013	SCOPUS
11	<b>T. K. Nguyen</b> , S. Kim, and I. Park	Impact of varying DC bias stripline connection angle on terahertz coplanar stripline dipole antenna characteristics	Journal of Electromagnetic Waves and Applications	27(14): 1725–1734	2013	SCIE
12	<b>T. K. Nguyen</b> , S. Kim, F. Rotermund, and I. Park	Design of a wideband continuous-wave photomixer antenna for terahertz wireless communication systems	Journal of Electromagnetic Waves and Applications	28(8): 976–988	2014	SCIE
13	<b>T. K. Nguyen</b> , F. Rotermund, and I. Park	A traveling-wave stripline dipole antenna on a substrate lens at terahertz frequency	Current Applied Physics	14(3): 998–1004	2014	SCI
14	<b>T. K. Nguyen</b> and I. Park	Design of a low-profile, high-gain Fabry-Perot cavity antenna for Ku-band applications	Journal of Electromagnetic Engineering and Science	14(3): 306–313	2014	SCOPUS
15	<b>T. K. Nguyen</b> , B. Q. Ta, and I. Park	Design of a planar, high-gain, substrate-integrated Fabry-Perot cavity antenna at terahertz frequency	Current Applied Physics	15: 1047–1053	2015	SCI
16	<b>T. K. Nguyen</b> and I. Park	Design of a substrate-integrated Fabry-Perot cavity antenna for K-band applications	International Journal of Antennas and Propagation	ID: 373801	2015	SCIE
17	<b>T. K. Nguyen</b> , Khai Q. Le, A. Canimoglu, and N. Can	Broadband luminescence of Cu nanoparticles fabricated in SiO <sub>2</sub> by ion implantation	Applied Radiation and Isotopes	115: 109–112	2016	SCI
18	N. Hussain, <b>T. K. Nguyen</b> , H. Han, and I. Park	Minimum lens size supporting the leaky-wave nature of slit dipole antenna at terahertz frequency	International Journal of Antennas and Propagation	ID: 5826957	2016	SCIE

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19	<b>T. K. Nguyen</b> , Phuc Toan Dang and Khai Q. Le	Numerical design of thin perovskite solar cell with fiber array-based anti-reflection front electrode for light-trapping enhancement	Journal of Optics (IOP science)	18(12): 125901	2016	SCI
20	P. T. Dang, <b>T. K. Nguyen</b> , and Khai Q. Le	Revisited design optimization of metallic gratings for plasmonic light-trapping enhancement in thin organic solar cells	Optics Communications	38: 241–245	2017	SCI
21	<b>T. K. Nguyen*</b> , W. T. Kim, B. J. Kang, H. S. Bark, K. Kim, J. Lee, I. Park, T.-I. Jeon, and F. Rotermond	Photoconductive dipole antennas for efficient terahertz receiver	Optics Communications	383: 50–56	2017	SCI
22	Khai Q. Le, Q. M. Ngo, and <b>T. K. Nguyen</b>	Nanostructured metal-insulator-metal metamaterials for refractive index biosensing applications: Design, fabrication, and characterization	IEEE Journal of Selected Topics in Quantum Electronics	23(2): 388–393	2017	SCI
23	<b>T. K. Nguyen</b> , P. T. Dang, I. Park and Khai Q. Le	Broadband THz radiation through tapered semiconductor grating on high-index substrate	Journal of Optical Society of America B (JOSA B)	34(3): 583–589	2017	SCI
24	H. H. Tran, I. Park, and <b>T. K. Nguyen*</b>	Circularly polarized bandwidth-enhanced crossed dipole antenna with a simple single parasitic element	IEEE Antenna and Wireless Propagation Letter	16: 1776–1779	2017	SCIE
25	H. H. Tran and <b>T. K. Nguyen*</b>	K-band planar and low-profile fabry-perot cavity antenna with a coupled strip-slitline feed structure	Applied Computational Electromagnetics Society Journal	32(6): 542–547	2017	SCIE
26	<b>T. K. Nguyen</b> , T. D. Le, P. T. Dang, and Khai Q. Le	Asymmetrically engineered nanodisk clusters for plasmonic Fano resonance generation	Journal of Optical Society of America B (JOSA B)	34(3): 668–672	2017	SCI
27	T. T. K. Nguyen, Q. M. Ngo, and <b>T. K. Nguyen*</b>	Design, modeling, and numerical characteristics of the plasmonic dipole nano-antennas for maximum field enhancement	Applied Computational Electromagnetics Society Journal	32(7): 634–641	2017	SCIE
28	D. D. Vo, A. G. Lipnitskii, <b>T. K. Nguyen*</b> and T. T. Nguyen	Nitrogen trapping ability of hydrogen-induced vacancy and the effect on the formation of aln in aluminum	Coatings	7(6): 79	2017	SCIE

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29	S. X. Ta and <b>T. K. Nguyen*</b>	Axial-ratio bandwidth and gain enhancements of patch antenna using single dielectric superstrate	Electronics Letters	53: 1015–1017	2017	SCI
30	A. A. A. Arani, O. A. Akbari, M. R. Safaei, A. Marzban, A. A.A.A. Alrashed, G. R. Ahmadi, and <b>T. K. Nguyen</b>	Heat transfer improvement of water/single-wall carbon nanotubes (SWCNT) nanofluid in a novel design of a truncated double-layered microchannel heat sink	International Journal of Heat and Mass Transfer	113: 780-795	2017	SCI
31	S. M. Hosseini, M. R. Safaei, M. Goodarzi, A.A.A.A. Alrashed, and <b>T. K. Nguyen</b>	New temperature, interfacial shell dependent dimensionless model for thermal conductivity of nanofluids,	International Journal of Heat and Mass Transfer	114, 207–210	2017	SCI
32	M. Y. A. Jamalabadi, M. R. Safaei, A. A. A. A. Alrashed, <b>T. K. Nguyen*</b> , and E. P. B. Filho	Entropy generation in thermal radiative loading of structures with distinct heaters	Entropy	19(10): 506	2017	SCIE
33	<b>T. K. Nguyen*</b> , H. H. Tran, and Nghia N.-T.	A wideband dual-cavity-backed circularly polarized crossed dipole antenna	IEEE Antenna and Wireless Propagation Letter	16: 3135–3138	2017	SCIE
34	P. T. Dang, T. T. Pham, K. Q. Le, and <b>T. K. Nguyen*</b>	Epsilon-near-zero enhanced plasmonic Brewster transmission through subwavelength tapered metallic gratings	Journal of the Korean Physical Society	72(1): 38–44	2018	SCI
35	H. Nasiri, M. Y. A. Jamalabadi, R. Sadeghi, M. R. Safaei, <b>T. K. Nguyen</b> , and M.S. Shadloo	A smoothed particle hydrodynamics approach for numerical simulation of nano-fluid flows	Journal of Thermal Analysis and Calorimetry	1–9	2018	SCI
36	T. T. Hoang, Q. M. Ngo, D. L. Vu, Khai Q. Le, <b>T. K. Nguyen</b> , Hieu P. T. Nguyen	Induced high-order resonance linewidth shrinking with multiple coupled resonators in silicon-organic hybrid slotted two-dimensional photonic crystals for reduced optical switching power in bistable devices	Journal of Nanophotonics	12(1): 016014	2018	SCIE
37	S. X. Ta, M. D. Nguyen, T. H.-Y. Nguyen, <b>T. K. Nguyen*</b> , K. K. Nguyen, N. C. Dao	A Low-Profile $\pm 45^\circ$ Dual-Polarized Antenna Based on Metasurface and Its Arrays for Base Station Applications	Journal of Electromagnetic Waves and Applications	1–20	2018	SCIE

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38	M. Y. A. Jamalabadi, M. Daqiqshirazi, H. Nasiri, M. R. Safaei, <b>T. K. Nguyen</b>	Modeling and analysis of biomagnetic blood Carreau fluid flow through a stenosis artery with magnetic heat transfer: A transient study	PLOS One	13(2): 1–32	2018	SCIE
39	A. Heydari, O. A. Akbari, ..., <b>T. K. Nguyen</b>	The effect of attack angle of triangular ribs on heat transfer of nanofluids in a microchannel	Journal of Thermal Analysis and Calorimetry	131(3): 2893–2912	2018	SCI
40	T. T. Pham, N. L. Le, N. H. Nguyen, K. T. Luong Thi, N. T. Pham, L. H. Nguyen, <b>T. K. Nguyen</b>	Encapsulating Gold Nanoparticles in Zeolitic Imidazolate Framework Crystal for Novel Optical Response	Polyhedron	148: 171–177	2018	SCI
41	M. R. Safaei, A. Karimipour, A. Abdollahi, <b>T. K. Nguyen</b>	The investigation of thermal radiation and free convection heat transfer mechanisms of nanofluid inside a shallow cavity by lattice Boltzmann method	Physica A	509: 515–535	2018	SCI
42	N. Nguyen-Trong, H. H. Tran, <b>T. K. Nguyen*</b> , and A. M. Abbosh	Wideband Fabry-Perot Antennas Employing Multilayer of Closely-Spaced Thin Dielectric Slabs	IEEE Antenna and Wireless Propagation Letter	17(7): 1354–1358	2018	SCIE
43	H. H. Tran, N. Nguyen-Trong, <b>T. K. Nguyen*</b> , and A. M. Abbosh	Bandwidth Enhancement Utilizing Bias Circuit as Parasitic Elements in a Reconfigurable Circularly-Polarized Antenna	IEEE Antenna and Wireless Propagation Letter	17(8): 1533–1537	2018	SCIE
44	S. X. Ta, M. D. Nguyen, T. H.-Y. Nguyen, <b>T. K. Nguyen*</b> , K. K. Nguyen, N. C. Dao	Low-Profile Broadband Dual-Polarized Antenna Utilizing Metasurface	Microwave and Optical Technology Letters	60:2534–2539	2018	SCIE
45	N. Nguyen-Trong, H. H. Tran, <b>T. K. Nguyen*</b> , and A. M. Abbosh	A Compact Wideband Circular Polarized Fabry-Perot Antenna Using Resonance Structure of Thin Dielectric Slabs	IEEE Access	6(1): 56333–56339	2018	SCIE
46	T. T. Le, H. H. Tran, and <b>T. K. Nguyen*</b>	Compact broadband circularly polarized slot-patch antenna	International Journal of RF and Microwave Computer-Aided Engineering	e21468: 1–7	2018	SCIE
47	M. Y. A. Jamalabadi, V. Ho-Huu, and <b>T. K. Nguyen*</b>	Optimal Design of Circular Baffles on Sloshing in a Rectangular Tank	Water	10(11): 1–18	2018	SCIE

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		Horizontally Coupled by Structure				
48	<b>T. K. Nguyen</b> and H. H. Tran	Air Gap Effect on Antenna Characteristics of Slitline and Stripline Dipoles on an Extended Hemispherical Lens Substrate	ACES Journal	33(9): 1018-1025	2018	SCIE
49	H. H. Tran, T. T. Le, and <b>T. K. Nguyen*</b>	Dual-band dual-sense circularly polarized antenna for S- and C-band applications	Microwave and Optical Technology Letters	61(1): 141-146	2019	SCIE
50	H. H. Tran, N. Nguyen-Trong, and <b>T. K. Nguyen*</b>	Low-profile wideband Fabry-Perot resonator antenna using artificial magnetic conductor surface	Microwave and Optical Technology Letters	61(2): 316-322	2019	SCIE
51	H. H. Tran, T. T. Le, C. D. Bui, and <b>T. K. Nguyen*</b>	Broadband Circularly Polarized Fabry-Perot Antenna Utilizing Archimedean Spiral Radiator and Multi-Layer Partially Reflecting Surface	International Journal of RF and Microwave Computer-Aided Engineering	e21647: 1-7	2019	SCIE
52	A. A. Alnaqia, H. Moayedi, A. Shahsavar, <b>T. K. Nguyen*</b>	Prediction of energetic performance of a building integrated photovoltaic/thermal system through artificial neural network and hybrid particle swarm optimization models	Energy Conversion and Management	183: 137-148	2019	SCI
53	Tuan V. Vu, Hien D. Tong, <b>T. K. Nguyen</b> , et. al.	Enhancement of monolayer SnSe light absorption by strain engineering: A DFT calculation	Chemical Physics	521: 5-13	2019	SCI
54	A. A. Alnaqi, ..., <b>T. K. Nguyen*</b>	Predicting the effect of functionalized multi-walled carbon nanotubes on thermal performance factor of water under various Reynolds number using artificial neural network	Physica A	521: 493-500	2019	SCI
55	A. A.A.A. Al-Rashed, ..., <b>T. K. Nguyen*</b>	Entropy generation of boehmite alumina nanofluid flow through a minichannel heat exchanger considering nanoparticle shape effect	Physica A	521: 724-736	2019	SCI
56	A. Moradikazerouni, ..., <b>T. K. Nguyen*</b>	Investigation of a computer CPU heat sink under laminar forced convection using a structural stability method	International Journal of Heat and Mass Transfer	134: 1218-1226	2019	SCI



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57	Abdullah A.A.A. Al-Rasheda, ..., <b>Truong Khang Nguyen*</b>	Numerical investigation of non-Newtonian water-CMC/CuO nanofluid flow in an offset strip-fin microchannel heat sink: Thermal performance and thermodynamic considerations	Applied Thermal Engineering	155: 247-258	2019	SCI
58	<b>T. K. Nguyen*</b>	High-Gain Circularly Polarized Fabry-Perot Antenna with Tapered FSS for X-Band	Electronics Letters	55(5): 241-242	2019	SCI
59	M. Sheikholeslami, ...Zhixiong Li*, <b>Truong Khang Nguyen*</b> , Mohsen Bakouri	Heat transfer and turbulent simulation of nanomaterial due to compound turbulator including irreversibility analysis	International Journal of Heat and Mass Transfer	137: 1290-1300	2019	SCI
60	W.I. Liu, ..., <b>Truong Khang Nguyen*</b>	Impact of oscillating magnetic field on the thermal-conductivity of water/Fe <sub>3</sub> O <sub>4</sub> and water-Fe <sub>3</sub> O <sub>4</sub> /CNT ferro-fluids: Experimental study,	Journal of Magnetism and Magnetic Materials	484: 258-265	2019	SCI
61	Y. Jiang, ..., <b>Truong Khang Nguyen*</b>	Hybrid GMDH-type neural network to predict fluid surface tension, shear stress, dynamic viscosity & sensitivity analysis based on empirical data of iron(II) oxide nanoparticles in light crude oil mixture,	Physica A	526: 120948	2019	SCI
62	Z. Li, ..., <b>Truong Khang Nguyen*</b>	Numerical simulation for entropy generation and hydrothermal performance of nanomaterial inside a porous cavity using Fe <sub>3</sub> O <sub>4</sub> nanoparticles	Physica A	524: 272-288	2019	SCI
63	<b>Truong Khang Nguyen*</b> , et al.	Influence of various shapes of CuO nanomaterial on nanofluid forced convection within a sinusoidal channel with obstacles	Chemical Engineering Research and Design	146: 478-485	2019	SCI
64	Z. Li, ..., <b>Truong Khang Nguyen*</b>	Ferrofluid irreversibility and heat transfer simulation inside a permeable space including Lorentz forces	Physica A	528: 121492	2019	SCI
65	<b>Truong Khang Nguyen</b> et al.	Design of heat exchanger with combined turbulator,	Journal of Thermal Analysis and Calorimetry	1-11	2019	SCI

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66	A. Shahsavari, ..., <b>Truong Khang Nguyen*</b>	Robust Weighted Least Squares Support Vector Regression algorithm to estimate the nanofluid thermal properties of water/graphene Oxide–Silicon carbide mixture	Physica A	525: 1418-1428	2019	SCI
67	Dat D. Vo, ..., and <b>Truong Khang Nguyen</b>	Effectiveness of various shapes of Al <sub>2</sub> O <sub>3</sub> nanoparticles on the MHD convective heat transportation in porous medium	Journal of Thermal Analysis and Calorimetry	1-9	2019	SCI
68	Son Xuat Ta, Cong Danh Bui, and <b>Truong Khang Nguyen*</b>	Wideband Quasi-Yagi Antenna with Broad-Beam Dual-Polarized Radiation for Indoor Access Points,	ACES Journal	34: 654-660	2019	SCIE
69	<b>Truong Khang Nguyen</b> , et al.	Solidification entropy generation via FEM through a porous storage unit with applying a magnetic field	Physica Scripta	94: 1-14	2019	SCI
70	M. Sheikholeslami, ..., <b>Truong Khang Nguyen*</b>	Application of nano-refrigerant for boiling heat transfer enhancement employing an experimental study,	International Journal of Heat and Mass Transfer	141: 974-980	2019	SCI
71	Q. Xiong, ..., <b>T. K. Nguyen</b>	Influences of nanoparticles with various shapes on MHD flow inside wavy porous space in appearance of radiation	Journal of Molecular Liquids	292: 111386	2019	SCI
72	H. Sudrajat, ..., <b>T. K. Nguyen</b>	Local structure of iron oxide sensitizing Nb <sub>2</sub> O <sub>5</sub> photocatalysts	Journal of Alloys and Compounds	806: 543-552	2019	SCI
73	P. T. Dang, Khai Q. Le, Q. M. Ngo, H. P. T. Nguyen, <b>T. K. Nguyen*</b>	Guided-mode Resonance Filter with Ultra-narrow Bandwidth over the Visible Frequencies for Label-free Optical Biosensor	Journal of Advance Engineering and Computation	3: 406-414	2019	SCIE
74	V. Dhasarathan, M. Sharma, M. Kapil, P. C. Vashist, S. K. Patel, <b>T. K. Nguyen*</b>	Integrated bluetooth/LTE2600 super wideband monopole antenna with triple notched (WiMAX/WLAN/DSS) band characteristics for UWB/X/Ku band wireless network applications	Wireless Network	26: 2845–2855	2020	SCIE

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75	V. Dhasarathan, <b>T. K. Nguyen</b> , M. Sharma, S. K. Patel, S. K. Mittal, and M. T. Pandian	Design, analysis and characterization of four port multiple-input-multiple-output UWB-X band antenna with band rejection ability for wireless network applications	Wireless Network	26: 4287–4302	2020	SCIE
76	C. D. Bui, N. Nguyen-Trong and <b>T. K. Nguyen</b>	A Planar Dual-Band and Dual-Sense Circularly Polarized Microstrip Patch Leaky-Wave Antenna	IEEE Antennas and Wireless Propagation Letters	19: 2162-2166	2020	SCIE
77	A. Desai, C. D. Bui, J. Patel, T. Upadhyaya, G. Byun, and <b>T. K. Nguyen*</b>	Compact Wideband Four Element Optically Transparent MIMO Antenna for mm-wave 5G Applications,	IEEE Access	8: 194206 - 194217	2020	SCIE
78	S. K. Patel, V. Sorathiya, <b>T. K. Nguyen*</b> , and V. Dhasarathan	Numerical investigation of tunable metasurface of graphene split-ring resonator for terahertz frequency with reflection controlling property	Physica E: Low-dimensional Systems and Nanostructures	118: 113910	2020	SCIE
79	S. K. Patel, J. Parmar, Y. P. Kosta, M. Ladumor, R. Zakaria, <b>T. K. Nguyen</b> , V. Dhasarathan	Design of graphene metasurface based sensitive infrared biosensor	Sensors and Actuators A: Physical	301: 111767	2020	SCIE
80	B. Jain, R. T. Velpula, H. Q. T. Bui, H. D. Nguyen*, T. R. Lenka, <b>T. K. Nguyen*</b> and H. P. T. Nguyen*	High performance electron blocking layer-free InGaN/GaN nanowire white-light-emitting diodes	Optics Express	28: 665-675	2020	SCIE
81	S. K. Patel, J. Parmar, M. Ladumor, K. Ahmed <b>T. K. Nguyen*</b> and V. Dhasarathan*	Numerical simulation of a highly directional optical leaky wave antenna using diamond-shaped graphene perturbations	Applied Optics	59: 2225-2230	2020	SCIE
82	Shobhit K. Patel; J. Parmar, Y. P. Kosta, S. Charola, R. B. Zakaria, <b>T. K. Nguyen*</b> and V. Dhasarathan*	Graphene-Based Highly Sensitive Refractive Index Biosensors Using C-Shaped Metasurface	IEEE Sensors Journal	20: 6359-6366	2020	SCIE
83	S. K. Patel, J. Parmar, H. Trivedi, R. Zakaria, <b>T. K. Nguyen*</b> and V. Dhasarathan*	Highly Sensitive Graphene-Based Refractive Index Biosensor Using Gold Metasurface Array	IEEE Photonics Technology Letters	32: 681-684	2020	SCIE

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Journal</i>	<i>Vol/pages</i>	<i>Year</i>	<i>Rank</i>
84	S. K. Patel, J Parmar, V Sorathiya, R Zakaria, V Dhasarathan, <b>T. K. Nguyen*</b>	Graphene-Based Plasmonic Absorber For Biosensing Applications Using Gold Split Ring Resonator Metasurfaces	Journal of Lightwave Technology	39: 5617-5624	2020	SCIE
85	C. D. Bui, T. C. Dang, M. T. Doan, and <b>T. K. Nguyen*</b>	A Frequency and Polarization Reconfigurable Dual-Patch Microstrip Antenna for Wireless ISM Band	ACES Journal	36: 152-158	2021	SCIE
86	H. H. Tran, C. D. Bui, N. Nguyen-Trong, and <b>T. K. Nguyen*</b>	A Wideband Non-Uniform Metasurface-Based Circularly Polarized Reconfigurable Antenna	IEEE Access	9: 42325-42332	2021	SCIE
87	M. Sharma, V. Dhasarathan, S. K. Patel, <b>T. K. Nguyen</b>	An ultra-compact four-port 4 x 4 super wideband MIMO antenna including mitigation of dual notched bands characteristics designed for wireless network applications	AEU - International Journal of Electronics and Communications	123: 15333	2021	SCIE
88	A. Desai, M. Palandoken, J. Kulkarni, G. Byun, <b>T. K. Nguyen*</b>	Wideband Flexible/Transparent Connected-Ground MIMO Antennas for Sub-6 GHz 5G and WLAN Applications	IEEE Access	9: 147003-147015	2021	SCIE
89	V. R. Balaji, T. Addepalli, A. Desai, A. Nella, <b>T. K. Nguyen*</b>	An inverted L-strip loaded ground with hollow semi-hexagonal four-element polarization diversity UWB-MIMO antenna	Transactions on Emerging Telecommunications Technologies	e4381	2021	SCIE
90	M. Sharma, R. Kumar, P. Kaur, V. Dhasarathan, <b>T. K. Nguyen*</b>	Design and analysis of on-demand reconfigurable WiMAX/WLAN high isolation 2 x 2 MIMO antenna oriented adjacent/orthogonally for imaging applications in UWB-X band	International Journal of RF and Microwave Computer-Aided Engineering	e22928	2021	SCIE
91	S. K. Patel, J. Parmar, V. Sorathiya, <b>T. K. Nguyen*</b> , and V. Dhasarathan*	Tunable infrared metamaterial-based biosensor for detection of hemoglobin and urine using phase change material	Scientific Reports	11: 7101	2021	SCIE
92	S. K. Patel, S. Charola, R. Jadeja, <b>T. K. Nguyen*</b> , V. Dhasarathan	Wideband graphene-based near-infrared solar absorber using C-shaped rectangular sawtooth metasurface	Physica E: Low-dimensional Systems and Nanostructures	12: 114493	2021	SCIE

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Journal</i>	<i>Vol/pages</i>	<i>Year</i>	<i>Rank</i>
93	S. K. Patel, J. Parmar, R. B. Zakaria, A. Sharafali, <b>T. K. Nguyen</b> , V. Dhasarathan	Sensitivity analysis of metasurface array-based refractive index biosensors	IEEE Sensors Journal	21: 1470-147	2021	SCIE
94	S. K. Patel, J Parmar, V. Sorathiya, R. Zakaria, V. Dhasarathan, <b>T. K. Nguyen*</b>	Graphene-Based Plasmonic Absorber For Biosensing Applications Using Gold Split Ring Resonator Metasurfaces	Journal of Lightwave Technology	39: 5617-5624	2021	SCIE
95	P. T. Dang, J. Kim, <b>T. K. Nguyen*</b> , K. Q. Le, J. H. Lee	Ultra-broadband metamaterial absorber for high solar thermal energy conversion efficiency	Physica B: Condensed Matter	620: 413261	2021	SCIE
96	H. Sudrajat*, S. Babel, S. Hartuti, J. Phanthuwongpakdee, K. Laohasurayotin, <b>T. K. Nguyen*</b> , Hien D Tong	Origin of the overall water splitting activity over Rh/Cr2O3@ anatase TiO2 following UV-pretreatment	International Journal of Hydrogen Energy	46: 31228-31238	2021	SCIE

\* Corresponding author

## 2. Selected international conference papers

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Conference name</i>	<i>Year</i>	<i>Location</i>
1	<b>T. K. Nguyen</b> , I. Woo, H. Choo, and I. Park	A compact dual spiral line loaded monopole antenna	IEEE Antennas and Propagation Society International Symposium	2007	USA
2	<b>T. K. Nguyen</b> , H. Choo, I. Park	A dual-spiral line loaded monopole antenna for quadband applications	IEEE Antennas and Propagation Society International Symposium	2008	USA
3	K. Han, <b>T. K. Nguyen</b> , H. Han, and I. Park	Yagi-Uda antenna with U-shaped dipole for a THz photomixer	Int. Conf. on Infrared, Millimeter, and Terahertz Waves	2009	Korea
4	<b>T. K. Nguyen</b> , I. Woo, H. Han, I. Park, and H. Lim	Four-leaf clover-shaped antenna on an extended hemispherical lens for a high output power THz photomixer	Int. Conf. on Infrared, Millimeter, and Terahertz Waves	2010	Italy
5	<b>T. K. Nguyen</b> , H. Han, and I. Park	Effects of finite substrate size of membrane structure on antenna performance at terahertz frequency	Global Symposium on Millimeter Waves	2011	Finland
6	<b>T. K. Nguyen</b> , T. A. Ho, H. Han, and I. Park	Full-wavelength dipole antenna on a membrane covered with a lens for a high gain terahertz photomixer	Global Symposium on Millimeter Waves	2012	China

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Conference name</i>	<i>Year</i>	<i>Location</i>
7	<b>T. K. Nguyen and I. Park</b>	Optimum design of terahertz photoconductive antenna	Asia-Pacific Microwave Photonics Conference	2013	Korea (Invited)
8	<b>T. K. Nguyen, H. Han, and I. Park</b>	Frequency selective surface for directivity enhancement of a terahertz photomixer antenna	IEEE Int. Workshop on Antenna Technology: Small Antennas, Novel Structures and Innovative Metamaterials	2013	Germany
9	<b>T. K. Nguyen and I. Park</b>	Comparative study of stripline dipole antenna on semi-infinite and lens substrates at terahertz frequency	European Conference on Antennas and Propagation	2014	Netherland (Invited)
10	<b>T. K. Nguyen, L. K. Dang, and I. Park</b>	Planar, High-gain, Substrate-integrated cavity antenna in the Terahertz frequency range	IEEE Antennas and Propagation Society International Symposium	2015	Canada
11	<b>T. K. Nguyen, K. Q. Quang Le, and I. Park</b>	Broadband terahertz radiation through a one-dimensional grating with a tapered slit on a high-index substrate	IEEE Antennas and Propagation Society International Symposium	2016	USA
12	<b>H. H. Tran and T. K. Nguyen</b>	Wideband High Gain Circularly Polarized Fabry-Perot Resonator Antenna with Asymmetric Superstrates	IEEE Antennas and Propagation Society International Symposium	2017	USA
13	Minh Thuan Doan, Cong Danh Bui, Huy Hung Tran, and <b>Truong Khang Nguyen*</b>	Incorporated Cavity Reflector and Parasitic Elements for Bandwidth Improvement of Circularly Polarized Crossed Dipole Antenna,	IEEE Antennas and Propagation Society International Symposium	2018	USA
14	Hamid Maleki, Mohammad Reza Safaei, Arturo S. Leon, and <b>Truong Khang Nguyen</b>	Thermal and Hydraulic Performance of Longitudinal Perforated Rectangular Fins with Perforation Shape and Size Variations	14th Thermal and Fluids Engineering Conference (TFEC)	2019	USA
15	Cong Danh Bui, Arpan Desai, and <b>Truong Khang Nguyen*</b>	A Design of ISM Band Transparent Metematerials backed Dual Ring CPW Fed Antenna for IoT Applications	IEEE Eighth International Conference on Communications and Electronics (ICCE)	2020	Vietnam
16	A. Desai, I. Akdag, M. Palandoken, C. D. Bui, J. Kulkarni, <b>T. K. Nguyen*</b>	Wide Slot Circularly Polarized Conductive Oxide-based Transparent Antenna Design for ISM Band RFID Applications	International Conference on Advanced Technologies for Communications (ATC)	2021	Vietnam

### 3. International book chapters

<i>N<sup>o</sup></i>	<i>Authors</i>	<i>Title</i>	<i>Publisher</i>	<i>Year</i>	<i>e-ISBN</i>
1	T. K. Nguyen and I. Park	Book: Convergence of Terahertz Sciences in Biomedical Systems Chapter 9: Resonant antennas on semi-infinite and lens substrates at terahertz frequency	Springer	2012	978-94-007-3965-9
2	P. Gandhi, Y. Patel, S. Shah, A. Desai, T. Upadhyaya, T. K. Nguyen	Book: Planar Antennas Chapter 4: Transparent Dielectric Resonator Antenna for Smart Wireless Applications	Taylor Francis	2021	978-10-031-8732-5

### 4. Patent

<i>N<sup>o</sup></i>	<i>Inventors</i>	<i>Title</i>	<i>Patent Agency</i>	<i>Year</i>
1	Park Ikmo and Nguyen Truong Khang	Terahertz Stripline Antenna	Korea Patent 10-1474318	2014
2	Truong Khang Nguyen	Device and Method for Bowtie Photoconductive Antenna for Bowtie Photoconductive Antenna	United States Patent and Trademark Office (USPTO) US11081604B2	2021

## IV. Editorial/reviewing service

### 1. Editorial board member

<i>N<sup>o</sup></i>	<i>Journal</i>	<i>Publisher</i>	<i>Role</i>
1	Recent Patents on Material Science	Bentham Science	Associate Editorial Board Members
2	Journal on Electronics and Communications (JEC)	The Radio and Electronics Association of Vietnam (REV)	Associate Editor
3	Journal of Advanced Engineering and Computation (JAEC)	Ton Duc Thang University	Managing Editor

### 2. Referee/reviewer

<i>N<sup>o</sup></i>	<i>Journal</i>	<i>Publisher</i>	<i>Rank</i>
1	IEEE Antenna and Wireless Propagation Letters	IEEE	SCIE
2	International Journal of RF and Microwave Computer-Aided Engineering	Wiley	SCIE
3	Optical and Quantum Electronics	Springer Nature	SCIE
4	The European Physical Journal Plus	Springer Nature	SCIE
5	AEÜ - International Journal of Electronics and Communications	Elsevier	SCIE
6	IEEE Sensors Journal	IEEE	SCIE

<i>N<sup>o</sup></i>	<i>Journal</i>	<i>Publisher</i>	<i>Rank</i>
7	Electronics Letters	IET	SCIE
8	IET Microwaves, Antennas and Propagation	IET	SCIE
9	Vietnam Journal of Science and Technology	VNU	
10	Journal of Computer Science and Communication Engineering	VNU	

### 3. Technical Program Committee:

- AETA 2015, 2016, 2017 (International Conference on Advanced Engineering–Theory and Applications)
- ISA 2016 (International Symposium on Intelligent systems and applications)
- ATC 2018, 2019, 2020, 2021 (International Conference on Advanced Technologies for Communications)
- ASMaS 2021 (International Conference on Advanced Smart Materials and Structures)

### 4. Invited Talk:

- Smart Machine Intelligence and Real-time Computing (SMART COM 2020, 26-27 June 2020, India)
- Webinar Series on Antenna and Propagation (IEEE Polish Join Chapter AP/MTT/AES, 8 April 2021, Poland)
- Endowment Chair at Electronics and Communication Engineering (CHARUSAT, 6 May 2021, India)

## VI. Scientific awards

<i>N<sup>o</sup></i>	<i>Name of awards</i>	<i>Organization</i>	<i>Years</i>
1	VNU-HCMC's Honor Student	University of Science HCM City (VNU-HCM)	2001
2	Brain Korea 21 (BK21) scholarship	BK21 Program by the Korean Government	2011
3	Award for Vietnamese Student in Korea with excellent research achievement	Vietnamese Embassy in Korea	2011
4	Award for Vietnamese Student in Korea with excellent achievement in research, and high contribution to Vietnamese Students' Association in Korea	Central Committee of the Vietnamese Student Association	2012
5	Brain Korea (BK21) Postdoctoral Research Scholarship	Ajou University (Korea)	2013
6	Research Grant Award (UNESCO)	TWAS (The World Academy of Sciences)	2016
7	International Conference Travel Award	NAFOSTED (Vietnam)	2017
8	Scholarships for Foreign Scientists Awarded	NAWA (Poland)	2021



## VII. Teaching

<i>N<sup>o</sup></i>	<i>Subject</i>	<i>Textbook</i>
1	Antenna and RF Systems (Undergraduate)	- <i>Antenna Theory: Analysis and design</i> , Constantine A. Balanis [2005], 3e., John Wiley & Sons, USA.
2	Advanced Antenna Theory and Design (Graduate)	- <i>Antennas for All Applications</i> , John D. Kraus, Ronald J. Marhefka, [2003], 3e., McGraw-Hill. - <i>Antenna Theory: Analysis and design</i> , Constantine A. Balanis [2005], 3e., John Wiley & Sons, USA.
3	Microwave Engineering (Undergraduate)	- <i>Microwave Engineering</i> , David M. Pozar [2012], 4e., John Wiley & Son, USA.
4	Microwave Theory and Circuit for Communications Systems (Graduate)	- <i>Radio-Frequency and Microwave Communication Circuits Analysis and Design</i> , D. K. Misra, [2001], 2e., John Wiley & Son, USA. - <i>Microwave Engineering</i> , David M. Pozar, [2012], 4e. John Wiley & Son, USA.
5	History of Science and Technology (Undergraduate)	- <i>The History of Science and Technology</i> , Bryan Bunch, Alexander Hellemans [2004], New York, USA.
6	Engineering Analysis (Undergraduate)	- <i>Modern Control Engineering</i> , Katsuhiko Ogata [2009], 5e., Prentice Hall, USA. - <i>Probability and Stochastic Processes: A Friendly Introduction for Electrical and Computer Engineers</i> , Roy D. Yates and David J. Goodman [2004], Wiley, USA.

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