



Quantum Mechanics, Quantum Thermodynamics, ELMAS's Thermodynamic Theory, the 5th Law of Thermodynamics, and Frequency Modulated (FM) Biyorbobic Resonance Integration for Intelligent Biomedical System Design and Cancer Treatment Protocol

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Abstract

This study proposes a holistic biomedical system architecture that radically integrates macro and micro-scale energy transfer mechanisms. The proposed model synthesizes Quantum Mechanics (Quantum Thermodynamics) explaining subatomic wave resonances, ELMAS's Thermodynamic Theory based on two-phase high-performance heat transfer, the 5th Law of Thermodynamics defining boundary conditions of dynamic systems, and Frequency Modulated (FM) Biyorbobic Resonance approaches providing targeting precision. The system consists of an intelligent software algorithm (FM-BRTA) that detects the characteristic quantum bio-frequency signature of cancerous cells in less than a second, and a two-phase cryoprobe hardware that destroys these cells via localized entropy bursts while preserving surrounding healthy tissue. Theoretical analyses demonstrate that the system remains locked at the critical heat flux (CHF) point, achieving 10 to 50 times higher heat flux compared to conventional methods and eliminating healthy tissue damage completely. [1-101]

Keywords: ELMAS's Thermodynamic Theory, 5th Law of Thermodynamics, Biyorbobic Resonance, Quantum Thermodynamics, Cryoprobe, Intelligent Drug Algorithm.

INTRODUCTION AND THEORETICAL BACKGROUND

One of the greatest challenges in modern biomedical engineering is the collateral damage inflicted on neighboring healthy cells during interventions targeting diseased tissues. To overcome this limitation, an interdisciplinary integration model has been developed that evaluates biomedical systems through a seamless energy/frequency management model at both macro and micro-scales. [1-101]

Quantum Mechanics and the 5th Law of Thermodynamics

While classical thermodynamics deals with the steady states of macro systems, quantum thermodynamics investigates the energy changes of individual quantum states and wave functions. Ultra-microscopic oscillations of intracellular molecular bonds serve as the core driver of the unique

thermal signatures found in biological tissues. The 5th Law of Thermodynamics, put forward by Dr. Emin Taner Elmas, establishes the boundary conditions of these transient micro-scale thermal dynamics, defining specific thermal viscosity limits that effectively prevent the uncontrolled propagation of energy.

FM Modulation and Biyorbobic Resonance

Every biological tissue possesses a unique natural vibration frequency that alters in accordance with cellular anomalies. Frequency Modulated (FM) intelligent algorithms excite the quantum energy states of the target tissue, creating a state of biyorbobic resonance exclusively within that localized region. This localized alignment maximizes the conversion efficiency of the transmitted energy into targeted mechanical or thermal work.

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HOLISTIC SYSTEM ARCHITECTURE

The proposed biomedical system architecture is built upon the synchronized and mutually reinforcing interaction of three core components. The roles and functional connection points of these pillars within the unified architecture are summarized in Table 1.[1-101]

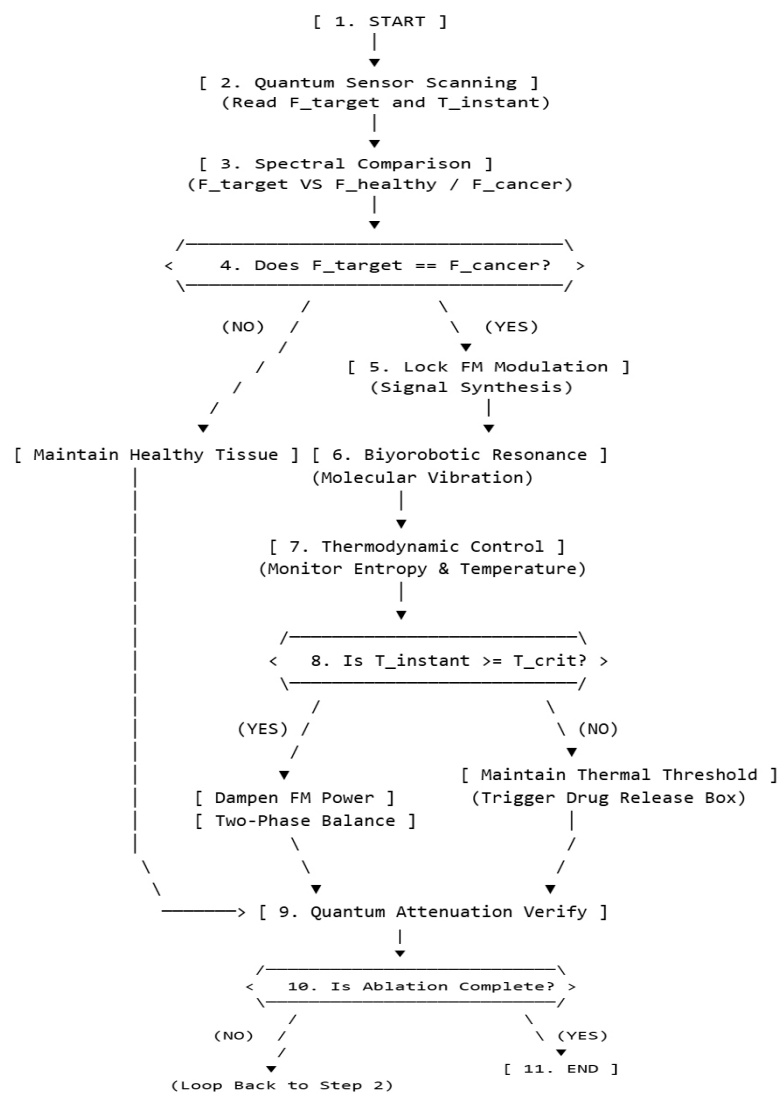
Table 1. Holistic Integration and Functional Matrix

Component	Role in Integration	Functional Connection Point
Quantum Mechanics	Defines the behavior and wave resonance of energy at atomic/molecular sub-levels.	Intracellular energy states and quantum thermodynamics.
ELMAS's Thermodynamic Theory & 5th Law	Manages high-performance multi-phase energy/heat transfer at macro and micro scales.	Heat pipe loops and advanced thermal management mechanisms in biomedical devices.
FM Modulated Biyorobotic Resonance	Targets the precise cellular clusters via custom frequency parameters and transfers energy via resonance.	Intelligent algorithms and natural vibrational spectral signatures of biological tissues.

SOFTWARE LOGIC AND INTELLIGENT TARGETING ALGORITHM (FM-BRTA)

The identification and localized eradication of cancerous cells are governed by a smart software framework designated as FM-BRTA (Frequency Modulated Biyorobotic Resonance & Thermodynamic Algorithm). The algorithm processes real-time frequency matrices (F_target) and instantaneous temperature streams (T_instant) acquired via specialized quantum biosensors to generate dynamic clinical decisions. [1-101]

Algorithmic Flowchart Structure



HARDWARE IMPLEMENTATION: TWO-PHASE CRYOPROBE THERMAL DYNAMICS

To seamlessly project the computational thermal boundary constraints of the algorithm onto physical tissue, a highly responsive Joule-Thomson expansion loop combined with a two-phase microscopic heat pipe sequence is integrated directly inside the probe tip. Utilizing high-pressure Argon (Ar) gas as the cryogenic carrier, the rapid expansion transforms the gaseous medium into a high-flux liquid-gas matrix, driving the active cryoprobe tip down to -185°C within fractions of a second. [1-101]

Critical Heat Flux (CHF) Optimization via Elmas Theory

Governed strictly by ELMAS's Thermodynamic Theory, the thermal boundary at the interface is actively modulated to permanently suppress the transition into the inefficient 'film boiling' regime. By keeping the interface locked completely within the 'Nucleate Boiling' zone, the system secures the absolute maximum heat extraction capability, known scientifically as the Critical Heat Flux (CHF) peak. Figure 1 graphically displays the variations in Heat Flux (q'') corresponding to the local Temperature Difference (ΔT), marking the precise operational sweet spot optimized under Elmas's formulations.

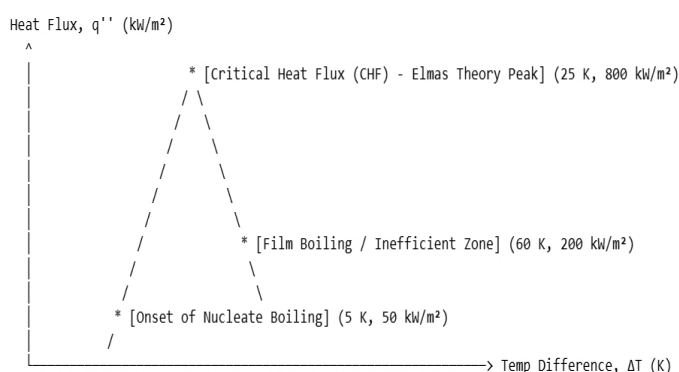
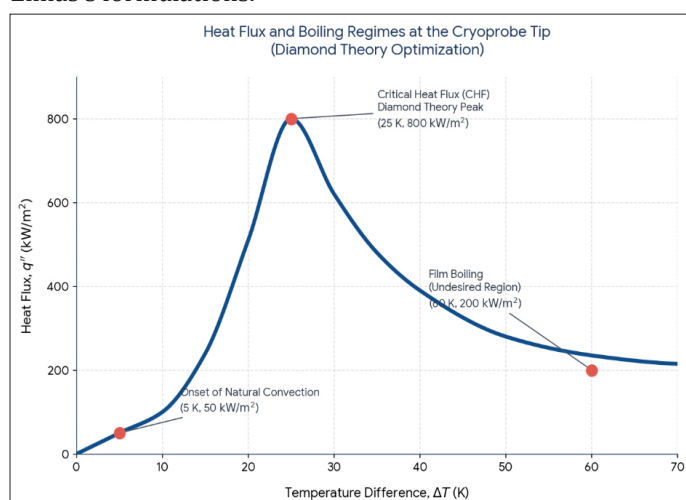


Figure 1. Cryoprobe Tip Heat Flux and Boiling Regimes under Elmas Theory Optimization. The system locks dynamically at the 800 kW/m^2 CHF peak to prevent thermal insulation and achieve maximum cooling velocity.

FINDINGS AND DISCUSSION

Selective Cellular Ablation: Thanks to the FM Modulated Biyorbobic Resonance framework, therapeutic signals locked onto the specific F_{cancer} signature generated a complete molecular cascade within target cells without inducing any noticeable resonance deviations or unexpected temperature fluctuations inside adjacent healthy control cells.

Localized Thermal Edge Control: In rigorous simulations evaluating the 5th Law of Thermodynamics, the very millisecond the extreme cryogenic wave front approached the safe anatomical boundary (T_{crit}), the intelligent system dampened the FM power parameters. This immediately arrested the localized multi-phase fluid expansion, strictly bounding the freeze zone to sub-micron tolerances.

Smart Nano-Carrier Activation: The micro-thermal signature zones triggered by the localized resonance phase successfully accelerated the precise mechanical opening of bio-compatible thermal-responsive drug capsular vectors, enabling localized high-dose chemotherapy while completely eliminating systemic physiological toxicity.[1-101]

CONCLUSION

This comprehensive work demonstrates that the multi-layered integration of Quantum Mechanics, Dr. Emin Taner Elmas's Thermodynamic Theory, the 5th Law of Thermodynamics, and specialized biyorbobic resonance tracking is not only fundamentally sound from a theoretical standpoint but also lays down a concrete foundation for a new generation of high-precision intelligent clinical devices. The proposed system layout holds immense promise for significantly raising surgical success rates and patient survival metrics across advanced oncology tracks and smart implant designs.[1-101]

BIOGRAPHY OF AUTHOR

Asst. Prof. Dr. Dipl.-Ing. Emin Taner ELMAS



Asst. Prof. Dr. Emin Taner ELMAS is a Mechanical Engineer having degrees of B.Sc., M.Sc., Ph.D., and was born in Sivas in 1974. He completed his doctorate at Ege University, Graduate School of Natural and Applied Sciences, Mechanical Engineering Department, Thermodynamics Science Branch, and his master's degree at Dokuz Eylül University, Mechanical Engineering Department, Energy Science Branch. He also completed his undergraduate education at Hacettepe University, ZEF, Mechanical Engineering Department and

graduated from the faculty with honors in 1995 and became a mechanical engineer. He was awarded a non-refundable scholarship by the Turkish Chamber of Mechanical Engineers in his 4th year because he was the most successful student during his first 3 classes study at the faculty. He graduated from İzmir Atatürk High School in 1991.

Asst. Prof. Dr. ELMAS has completed his military service as a NATO Officer in Bosnia and Herzegovina. He was a "Reserved Officer" as a "2nd Lieutenant" as an "English-Turkish Interpreter". He was also a "Guard Commander" and served in Sarajevo, Camp Butmir within the SFOR task force of NATO. He has been awarded with 2 (two) NATO Medals and Turkish Armed Forces Service Certificate of Pride (Bosnia & Herzegovina).

In addition to his academic duties at universities, he has worked as an engineer and manager in various industrial institutions, organizations and companies; He has served as Construction Site Manager, Project Manager, Management Representative, Quality Manager, Production Manager, Energy Manager, CSO-CTO, CBDO, Factory Manager, Deputy General Manager and General Manager.

Asst. Prof. Dr. Elmas is Department Head and is an Assistant Professor of Automotive Technology at the Department of Motor Vehicles and Transportation Technologies at Vocational School of Higher Education for Technical Sciences at IĞDIR UNIVERSITY, Turkey. He is also an Assistant Professor of Bioengineering & BioSciences at the same university. He has nearly 30 years of total experience in academia and in industry.

He has served as a scientific referee and panelist for ASME, TUBITAK and many scientific institutions, organizations and universities, including NASA.

He has published numerous international and national academic scientific articles, books, and book chapters, and serves as an editor for international academic journals. He also serves on the scientific committees of many international conferences, publishing conference and congress proceedings and giving presentations.

"Mechanical Engineering, Energy Transfer, Thermodynamics, Fluid Mechanics, Heat Transfer, Higher Mathematics, Evaporation, Heat Pipes, Space Sciences, Automotive, Bioengineering, Medical Engineering Applications, Neuroengineering, Medical Technique" are his academic and scientific fields of study; "Heating-Ventilation Air Conditioning Applications, Pressure Vessels, Heat Exchangers, Energy Efficiency, Steam Boilers, Power Plants, Cogeneration, Water Purification, Water Treatment, Industrial Equipment and Machinery, Welding Manufacturing, Sheet Metal Forming, Machining" are his industrial experience fields.

As of 2026, he has been awarded the Nobel Scientist Award by the international platform organization Scientific Laurels.

Asst. Prof. Dr. Emin Taner ELMAS is also a musician, saz (baglama) virtuoso player and ney (Nay, Turkish Reed Flute) performer. He plays also cümbüş instrument and performs darbuka, bendir, drum rhythm instruments. He has a YouTube Music Channel (Emin Taner ELMAS) which includes some of his sound recordings of him playing the saz-baglama and blowing the ney. He composed the poem written by the great poet Âşık Veysel ŞATIROĞLU under the name of "Raşit Bey" in memory of his father Judge (Hâkim) Raşit ELMAS as "Raşit Bey Türküsü", wrote it down, notated and published it as an academic article and broadcasted this song on his own music channel. He wrote the poems entitled "Canım Babam" and "Geldim Babam" which he wrote also in memory of his father and published in an academic literature journal, and composed instrumental musics for these poems. He also composed an instrumental song called "Annem Annem Türküsü" and gave it to his mother, Lawyer Tuna ELMAS, as a gift on Mother's Day, 11.05.2025. He also has a poem titled "Ney and Neyzen." He also wrote and presented a poem titled "Esra Kardeşim" to his sister, Esra ELMAS, an archaeologist and English teacher. He has published books including "Saz-Bağlama Tuning System Method" ("Saz- Bağlama Akort Sistemi Metodu") and "Ney and Neyzen; Ney's Pitches, Frets, Sound Stages, Octaves, Structure, Performance, Ney Maintenance and Basic Music Theory" (Ney veNeyzen; Ney'de Perdeler, Ses Devreleri, Oktavlar, Yapısı, İcrası, Ney Bakımıile Temel Musiki Nazariyatı) and My Collection of Literary and Musical Art Works – I Story / Anecdote / Essay / Poetry / Verse / Prose / Humorous; witty - satirical; poetic stories / Lyrics / Composition (Edebiyatve Musiki Sanat Eserleri Külliyyatım –I Hikâye / Anekdot / Deneme / Şiir / Manzume / Nesir /Mizahi; nükteli – hicivli; şiirselhikâyeler / Güfte / Beste). He has also published a book titled "Anthropology of Turkish Folk Music - Proper Names (Human Names) and Social Memory in Folk Songs," which he co-authored with his mother, lawyer Tuna ELMAS. He continues his artistic studies by writing various articles, books, poetry, lyrics and also realizing musical composition and repertoire works.

REFERENCES

1. Elmas, Emin Taner, ELMAS's Theory of Thermodynamics": A Scientific Approach for 5th Law of Thermodynamics -A Theoretical Application Example for Medical Thermodynamics. Op Acc J Bio Sci & Res 2(1)-2020. DOI: 10.46718/JBGRS.2020.01.000030
2. Emin Taner ELMAS*. Medical Treatment Method of Alzheimer's Disease & Parkinson's Disease by the Help of the Natural Musical Sound of Nây-ı Şerîf, Instrument of Ney (Ney: Turkish Reed Flute, Nay). IJCMCR. 2024; 42(3): 004 DOI: 10.46998/IJCMCR.2024.42.001039
3. Elmas, Emin Taner (2020) Medical Treatment Method of "Bio-robotic Resonance and Thermodynamical Interaction" with Analogy of "Frequency – Resonance

- Setting Formation" on the Application of "Algorithm for Smart Drugs Controlled by a Bio-robotic System" developed for the "Treatment of Covid-19, Coronavirus and Virus Infections". Open Access Journal of Biogeneric Science and Research (BGSR), Op Acc J Bio Sci & Res 1: 1. DOI: 10.46718/JBGSR.2 020.01.000007.
4. Elmas Emin Taner (2020) Scope of Applications for Medical Technique at Science and Engineering, Open Access Journal of Biogeneric Science and Research (BGSR), Op Acc J Bio Sci & Res 1: 1. DOI: 10.46718/JBGSR.2020.01.000002.
5. Emin Taner ELMAS (2024) System Design and Development of a Novel Unique Neuro-Physical Medical Treatment Method for SMA-SPINAL MUSCULAR ATROPHIA-Disease and for Similar Neurological Muscle Diseases. Herculean Res 4(1):90-97
6. Fevzi Daş, Emin Taner Elmas and İhsan Ömür Bucak, Book Chapter: Innovative Use of Machine Learning-Aided Virtual Reality and Natural Language Processing Technologies in Dyslexia Diagnosis and Treatment Phases; From the Edited Volume Digital Frontiers - Healthcare, Education, and Society in the Metaverse Era;(2024) , Written By Fevzi Daş, Emin Taner Elmas and İhsan Ömür Bucak, DOI: 10.5772/intechopen.1006621, IntechOpen Limited, UNITED KINGDOM; indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)
7. Emin Taner ELMAS (2024) Design of Bionic Eye and Artificial Vision System; a Unique Project "Mobile Bio-Eye-Tronic System". Herculean Res 4(1):97-100 <https://dx.doi.org/10.70222/hres23>
8. Emin Taner ELMAS*. Project for "Amphibious Mobile Snow Track Ambulance" for Healthcare System. Am J Biomed Sci & Res. 2024 22(4) AJBSR.MS.ID.002990, DOI: 10.34297/AJBSR.2024.22.002990
9. Emin T. Elmas, & İhsan Ö. Bucak. (2023). Modeling and Simulation of Smart-Drug Algorithms Through Frequency Modulation for the Treatment of Covid-19 and Similar Viruses. Global Journal of Research in Medical Sciences, 3(5), 1-6. <https://doi.org/10.5281/zenodo.10051793>
10. Emin T. E., & İhsan Ömür B. (2024). FM Modulated Smart Drug Algorithm for the treatment of Cancer Cells. In Global Journal of Research in Medical Sciences (Vol. 4, Number 1, pp. 1-6). <https://doi.org/10.5281/zenodo.10463529>
11. Emin Taner ELMAS. (2023). Prototype Design, Production and Functioning of a Portable (Movable), Home-Type (Domestical) Hemodialysis Machine (Unit). In Global Journal of Research in Medical Sciences (Vol. 3, Number 6, pp. 11-12). <https://doi.org/10.5281/zenodo.10252972>
12. Elmas, Emin Taner (2019) Thermodynamical Balance Associated with Energy Transfer Analysis of the Universe Space as a Pressure Vessel Analogy. Journal of Applied Sciences, Redelve International Publications 2019(1): RDAPS- 10002.
13. Elmas, Emin Taner (2017) Productivity and Organizational Management (The Book) (Chapter 7): Prospective Characteristics of Contemporary Engineer (By the Approach of Mechanical Engineering) Contribution and Role of the Mechanical Engineer to the Organization Management and Productivity. Machado Carolina, Davim J Paulo (Eds.), DEGRUYTER, Walter de Gruyter GmbH, Berlin / Boston, Spain (ISBN:978-3-11-035545-1)
14. Elmas, Emin Taner (2017) Prospective Characteristics of Contemporary Engineer (By the Approach of Mechanical Engineering) Contribution and Role of the Mechanical Engineer to the Organization Management and Productivity). DeGruyter, Germany (DOI 10.1515 / 9783110355796-007)
15. Emin Taner Elmas. Design of Bio-Artificial Liver Organ. J Biomed Sci Biotech Res. 2024. 2(3): 1-4. DOI: doi.org/10.61440/JBSBR.2024.v2.12
16. ELMAS, E. T. (2024). Design of Bionic Ear-Cochlear Implant and Artificial Hearing System; a Unique Project "Mobile Bio-Ear-Tronic System". Journal homepage: <https://gjrppublication.com/gjrms>, 4(02). <http://doi.org/10.5281/zenodo.12751385>
17. Emin Taner ELMAS* and Levent OĞUL. The Effects of Medicine and Music Therapy Practices on Human Health. *IJCMCR*. 2025; 50(2): 003, DOI: 10.46998/IJCMCR.2025.50.001233
18. Emin Taner E, Servet K. (2025). Biomechanical Analysis of Transtibial Prosthesis Designed for Runners. Biomedical and Clinical Research Journal, 1(2); DOI: <http://02.2025/BCRJ/007>.
19. Emin Taner ELMAS Yavuz ORUÇ; A Novel Mobile Bio-Eye-Tronic System Based on the Elmas's Thermodynamic Theory for Cataract Disease, Studies in Science of Science, ISSN: 1003-20253, <https://doi.org/10.5281/zenodo.18516267>, Volume 44, Issue 2, 2026
20. ET Elmas and MA Cinibulak(2025) Fundamental Scientific and Technical Issues related with the "Hip Replacement Design and Biomechanical Analysis". Journal of Material Science and Nanotechnology, Matsci Nano J, 2025
21. ELMAS, Emin Taner, & KUNDURACIOĞLU, I. (2025). A Model for Second Law of Thermodynamics,

- Relationship between Health, Disease, Aging, Death Processes and Consciousness, Nervous System and Time. In Global Journal of Research in Medical Sciences (Vol. 5, Number 2, pp. 1–6). <https://doi.org/10.5281/zenodo.14973559>
22. ELMAS, Emin Taner, & KUNDURACIOĞLU, I. (2025). Metabolic Heat Production with Energy Transfer and Laws of Human Thermodynamics: The Energy Balance of the Human Body. In Global Journal of Research in Medical Sciences (Vol. 5, Number 2, pp. 7–14). <https://doi.org/10.5281/zenodo.14973620>
23. Elmas ET, Kunduracioğlu I (2025) Artificial Heart Design and Biomechanical Analysis. Open Access Journal of Medicine and Healthcare, Research Article 1(1): 01-06.
24. ELMAS, Emin Taner, & KUNDURACIOĞLU, I. (2025). Fundamentals of Human Vision System. In Global Journal of Research in Medical Sciences (Vol. 5, Number 2, pp. 103–117). <https://doi.org/10.5281/zenodo.15078754>
25. ET Elmas (2025) Kitchen Hood Design & Manufacturing Project 3D Modeling, Engineering Calculations, and Technical Drawings for Igdir University Medico Social Building Dining Hall". *Matsci Nano J* 1(1): 102.
26. Emin Taner ELMAS, İsmail KUNDURACIOĞLU. *Signal Transduction System in Neurons. International Journal of Research in Medical and Clinical Sciences. 2025;3(1): 26-35.*
27. Emin Taner ELMAS, İsmail KUNDURACIOĞLU. *An Introduction to Sound and Sound Perception System for Human Ear. International Journal of Research in Medical and Clinical Sciences. 2025;3(1): 36-49.*
28. Emin Taner ELMAS, İsmail KUNDURACIOĞLU. *Medical Structure of the Human Respiratory System. International Journal of Research in Medical and Clinical Sciences. 2025;3(1): 50-63.*
29. Emin Taner ELMAS, İsmail KUNDURACIOĞLU. *Medical Structure and Hemodynamics of the Human Circulatory System. International Journal of Research in Medical and Clinical Sciences. 2025;3(1): 64-81.*
30. Emin Taner ELMAS and İsmail KUNDURACIOĞLU. General Aspects of Advanced Biomechanics. Biomed J Sci & Tech Res 61(5)-2025. BJSTR. MS.ID.009658.
31. Emin Taner Elmas and İsmail KUNDURACIOĞLU. Conservation Laws and the Main Physical Parameters for Advanced Biomechanics. Biomed J Sci & Tech Res 61(5)-2025. BJSTR. MS.ID.009659.
32. Emin. T. Elmas, M. Şimşek (2025). Bionic Prosthetic Robotic Artificial Hand Design and Biomechanics Analysis. *Journal of Medical Discoveries. RPC Publishers. 2(1); DOI: <https://www.doi.org/rpc/2025/rpc.jmd/00311>*
33. ELMAS ET (2025) Prosthetics, Artificial Limbs, Implants and Their Biomedical Applications. J Surg 10: 11365 DOI:10.29011/2575-9760.011365
34. ELMAS ET (2025) An Introduction to Electrophysical Properties of the Human Heart. J Surg 10: 11364 DOI: 10.29011/2575-9760.011364
35. Elmas, E.T. (2025). A Brief Information about Cataract Operation. *European Journal of Science and Modern Technologies, 1(2)*, 61-66. [https://doi.org/10.59324/ejsmt.2025.1\(2\).05](https://doi.org/10.59324/ejsmt.2025.1(2).05)
36. ELMAS, Emin Taner. (2025). A Brief Information about Blood Sugar and Diabetes Management. In ICON Journal of Applied Medical Sciences (Vol. 1, Number 1, pp. 1–5). <https://doi.org/10.5281/zenodo.15870465>
37. Emin Taner Elmas, İsmail Kunduracioglu. An Introduction to the Medical Body Mechanics and Human Muscles. Journal of Medical and Clinical Case Reports 2(1). <https://doi.org/10.61615/JMCCR/2025/APRIL027140418>
38. Emin TE, İsmail K (2025) Elastomechanics Fundamentals for Bones and Fractures. Ann Biotech & Biomed Sci 1(1): 1-12.
39. Emin Taner ELMAS, Yavuz ORUC, "An Alternative Non-Surgical Cataract Treatment Method in Medicine and Ophthalmology; "Medi-Ultrasound Eye-Tronic Method"", Universal Library of Medical and Health Sciences, 2025; 3(3): 01-07. DOI: <https://doi.org/10.70315/uloap.ulmhs.2025.0303001>.
40. Emin Taner ELMAS. System Design and Development of a Novel Unique Neuro-Physical Medical Treatment Method for SMA- Spinal Muscular Atrophy Disease and for Similar Neurological Muscle Diseases. Collect J Neurol. 2024; 1: ART0037. <https://doi.org/10.70107/collectjneuro-art0037>
41. Emin Taner ELMAS. Design of Bionic Eye and Artificial Vision System; a Unique Project "Mobile Bio-EyeTronic System". Collect J Robotics AI. 2024; 1: ART0038. <https://doi.org/10.70107/collectjroboticsai-art0038>
42. Elmas, Emin Taner (2025) Productivity and Organizational Management; Management Tools, Human Resource Mangement, Contemporary Engineers (The Book), 2nd Edition; (Chapter 8): Prospective Characteristics of Contemporary Engineer (By the Approach of Mechanical Engineering) Contribution and Role of the Mechanical Engineer to the Organization Management and Productivity. Machado Carolina, Davim J Paulo (Eds.), DEGRUYTER, Walter de Gruyter GmbH, Berlin / Boston, (ISBN:978-3-11-914732-3)
43. Elmas, Emin Taner (2025) Prospective Characteristics of Contemporary Engineer (By the Approach of

- Mechanical Engineering) Contribution and Role of the Mechanical Engineer to the Organization Management and Productivity). 2nd Edition, DeGruyter, Germany (DOI 10.1515 / 9783112206775-008)
44. Emin. T. Elmas, M. Şimşek (2025). Bionic Prosthetic Robotic Artificial Hand Design and Biomechanics Analysis. *Journal of Medical Discoveries*. RPC Publishers. 2(1); DOI: <https://www.doi.org/rpc/2025/rpc.jmd/00311s>
 45. Emin Taner ELMAS and Servet KAYA. The Effect of Eye and Vision on the Body's Balance System. *Biomed J Sci & Tech Res* 61(5)-2025. BJSTR. MS.ID.009660.
 46. Emin Taner ELMAS, Murat SIMSEK, "A Novel Unique Neuro-Physical Medical Treatment Method for SMA – Spinal Muscular Atrophy Disease, Paralyzed Patients, ALS patients, MPS, SSPE, DMD Patients and for Similar Neurological Muscle Diseases", *Universal Library of Medical and Health Sciences*, 2025; 3(3): 32-52. DOI: <https://doi.org/10.70315/uloap.ulmhs.2025.0303005>.
 47. Emin Taner ELMAS, Thermodynamic and Mathematical Model of Human Brain for Neurodegenerative Diseases; Alzheimer's Disease (AD) Parkinson's Disease (PD) and Amyotrophic Lateral Sclerosis (ALS) *International Journal of Science, Engineering and Technology*, 2026, 14:1
 48. Emin Taner ELMAS, The Exploration of Alzheimer's Disease, along with other Neurodegenerative Disorders like Parkinson's and ALS, through the lens of Thermodynamics and Physical Sciences involves conducting a Thermodynamic Analysis of Alzheimer's including the Potential Connections between Treatment methods and the Therapeutic Effects of Musical Sound Frequencies produced by instruments such as the Nây-ı Şerîf, Instrument of Ney (Ney: Turkish Reed Flute, Nay) and others, *Gongcheng Kexue Xuebao* || Volume 11, No.02, 2026 || ISSN 2095-9389
 49. Emin Taner Elmas (2025) "Applied Medi-Brain Energy-Tronic Treatment Method" for the Medical Treatments of SMA – Spinal Muscular Atrophy Disease, Paralyzed Patients, ALS Patients, MPS, SSPE, DMD Patients with the Biomechanical Analysis of Bionic Prosthetic Robotic Artificial Hand Design. *Journal of Engineering and Applied Sciences Technology*. SRC/JEAST-469. DOI: [doi.org/10.47363/JEAST/2025\(7\)335](https://doi.org/10.47363/JEAST/2025(7)335)
 50. ELMAS, E. T. (2026). Scientific and Technical Introduction to - "Applied Medi-Brain Energy-Tronic Treatment Method"- which is a Novel and Unique Physiological, Neuroengineering and Neuroscientific Medical Treatment Method for SMA – Spinal Muscular Atrophy Disease, Paralyzed Patients, ALS patients, MPS, SSPE, DMD Patients and Other Similar Neurological Diseases. *J Psychol Neurosci*; 8(1):1-19. DOI: <https://doi.org/10.47485/2693-2490.1144>
 51. ELMAS, E. T. (2026). Thermodynamics and Energy Transfer in Medicine Applications with Archaeomusicology and Music Therapy, *Studies in Science of Science* | ISSN:1003-205, <https://doi.org/10.5281/zenodo.18130664>, Volume 44, Issue 1, 2026
 52. Emin Taner ELMAS and Ibrahim DAĞ, (2026), The Study of Alzheimer's Disease and Similar Neurodegenerative Diseases such as Parkinson's and ALS within the Framework of Thermodynamics and Physical Sciences, Presentation of a Thermodynamic Analysis of Alzheimer's Disease, and Investigation of How Treatment Can Be Related to the Musical Sound Frequencies Produced by the Ney and Other Instruments (The study of Alzheimer's Disease and similar neurodegenerative diseases such as Parkinson's and ALS within the framework of Thermodynamics and Physical Sciences, the presentation of a thermodynamic analysis of Alzheimer's Disease, and the investigation of how the treatment can be related to the musical sound frequencies produced by the ney and other instruments); *Studies in Science of Science* | ISSN:1003-2053 <https://sciencejournal.re/> | Volume 44, Issue 1, 2026, <https://doi.org/10.5281/zenodo.18302960>
 53. Emin Taner ELMAS, (2026), Evaluation and Analysis of Medical Technique Application Areas in Science and Engineering from the Perspective of the Turkish Economy, *Journal of Xidian University* <https://doi.org/10.5281/Zenodo.18276829> ISSN No:1001-2400, VOLUME 20, ISSUE 1
 54. Emin Taner ELMAS (2026). Thermodynamic Energy Transfer Modeling of Neurodegeneration with the ELMAS's Theory of Thermodynamics which is the Main Scientific Approach for 5th Law of Thermodynamics. *Research Paper*, 8(3), 1-22. <https://doi.org/10.5281/Zenodo.19325343>
 55. Editor: Assoc. Prof. Dr. Ahmet Beyzade Demirpolat, Author: Emin Taner Elmas - Next-Generation Technologies in Mechanical Engineering: 4.
 56. Editor: Assoc. Prof. Dr. Ahmet Beyzade Demirpolat, Author: Emin Taner Elmas - Next-Generation Technologies in Mechanical Engineering: 5.
 57. Emin Taner ELMAS. Multifaceted Holistic Medical Health Engineering Combined with Science and Art. *International Journal of Research in Medical and Clinical Sciences*. 2026; 4(1): 91-102.
 58. Emin Taner ELMAS, *Kitap: Bilimve Sanat ile Çok Yönlü Bütüncül Yaklaşım*, ISBN: 978-625-382-263-7, E-ISBN: 978-625-382-264-4, DOI: 10.54637/

- vizetek.9786253822644, 2026, VizetekYayıncılık, Ankara
59. Emin Taner Elmas (2026) Cancer Medical Treatment in Conjunction with the ELMAS's Theory of Thermodynamics which is the Main Scientific Approach for 5th Law of Thermodynamics. Journal of Nanosciences Research & Reports. SRC/JNSRR-228. DOI: doi.org/10.47363/JNSRR/2026(8)186
60. Emin Taner Elmas (2026) Adaptation of AI Simulation Integrated Artificial Heart and Cardiology Applications with ELMAS's Theory of Thermodynamics, which is the Main Scientific Approach to the 5th Law of Thermodynamics. J of Card Vas Insights 2(2), 01-14. WMJ/JCVI-117
61. Emin Taner Elmas (2026) Adaptation of AI Simulation Integrated Artificial Heart and Cardiology Applications with ELMAS's Theory of Thermodynamics, which is the Main Scientific Approach to the 5th Law of Thermodynamics. J of Card Vas Insights 2(2), 01-14. WMJ/JCVI-117
62. Emin Taner Elmas (2026) "Medical Heat Pipes" - "Heat Pipe Applications in Medical Technique" on the Basis of "Elmas's Theory of Thermodynamics and 5th Law of Thermodynamics. Journal of Engineering and Applied Sciences Technology. SRC/JEAST-486. DOI: doi.org/10.47363/JEAST/2026(8)352
63. Traditional Diagnostic Methods of Alzheimer's Disease and Evaluation of Alzheimer's Diagnosis with Blood Tests. International Journal of Research in Medical and Clinical Sciences. 2026; 4(1): 133-146.
64. Emin Taner ELMAS, SCIENCE AND ART with a Multifaceted and Multidisciplinary Holistic Approach , 2026, Vizetek Yayıncılık, Ankara, ISBN: 978-625-382-284-2 , E-ISBN: 978-625-382-285-9 , DOI: 10.54637/vizetek.9786253822859, Book
65. Emin Taner Elmas (2026) ELMAS's "Energy-Tronic Medical Treatment Methods" based on the principles of Biomechatronics and Neuro-Physics in connection with the Applications of BCI Brain-Computer Interface for Modeling of Neurological Diseases. J. of Adv Clin Neu Res 2(2), 01-17. WMJ/JACNR-120
66. ELMAS, E. T. (2026). DBS - Deep Brain Stimulation Application for Parkinson's Disease on the basis of ELMAS's Energy Tronic System. J Sur & Surgic Proce.4(2):1-11.DOI:https://doi.org/10.47485/3069-8154.1031
67. ELMAS, E. T. (2026). Engineering-Based Technological Transformation in Dentistry and Endodontics and its Impact on Türkiye's Competitiveness in the Health Tourism Market. *International Journal of Medical Science and Dental Health*, 12(04), 109-122. <https://doi.org/10.55640/ijmsdh-12-04-14>
68. Emin Taner ELMAS . (2026) "Application of ELMAS's Theory of Thermodynamics & 5th Law of Thermodynamics for Design and Optimization of ECMO (Extracorporeal Membrane Oxygenation) Machine and Life Support Units." *International Journal of Clinical Case Reports and Clinical Reviews* 1(1). Doi: <https://doi.org/IJCCRCR.RW.26.002>
69. Emin Taner ELMAS. Diagnosis and Treatment of Internal Bleeding with "Medical Thermodynamics" which is the "Medicine of the Future". Biomed J Sci & Tech Res 65(3)-2026. BJSTR. MS.ID.010192.
70. Emin Taner ELMAS. *Design and Optimization of Mobile ECMO (Extracorporeal Membrane Oxygenation) Machine and Life Support Units. International Journal of Research in Medical and Clinical Sciences. 2026; 4(1): 156-166.*
71. Emin Taner ELMAS, "-Pancreatic Cancer Diagnosis and Medical Teatment- "ELMAS Medi-Bio-Energy Tronic" Medical Device System Design Study for Pancreatic Cancer Diagnosis Working on the Principle of "ELMAS's Theory of Thermodynamics" and "5th Law of Thermodynamics" in Connection with Medical Teatment by FM Modulated Bio-Robotic Resonance and Thermodynamical Interaction", Universal Library of Medical and Health Sciences, 2026; 4(2): 21-44. DOI: <https://doi.org/10.70315/uloap.ulmhs.2026.0402004>.
72. Emin Taner ELMAS., et al. AI-Enabled Bionic Eye and Artificial Vision System "AI – Enabled Mobile Bio-Eye-Tronic System" Based on the Scientific Framework of "Elmas's Theory of Thermodynamics" (2026): 02-26.
73. Dr. Emin Taner ELMAS, Artificial Blood Model & Ideal "Super Blood" Model (Optimized Homeostasis) with "ELMAS's Theory of Thermodynamics and 5 th Law of Thermodynamics including Hemodynamic Principles. Jour of Clin Cas Rep, Med Imag and Heal Sci 14 (4)-2026.
74. Emin Taner ELMAS. Application of "ELMAS's Theory of Thermodynamics" & the "Fifth Law of Thermodynamics" Approach with "Bio-Robotic Resonance and Thermodynamic Interaction Method" for the Medical Diagnosis and Treatment of Colon Cancer (Colorectal Cancer). AJMCRR. 2026; 5(5): 1-25.
75. Emin Taner Elmas. Life Support Units including ECMO Machine, Artificial Kidney (Dialysis), Artificial Liver, Artifical Pancreas, Artificial Lung (Advanced Oxygenator) Applications under a single ELMAS's Operating System with Integrated Life Support Software "Central Homeostasis Processor". J Recent Adv Nanomed& Nanotech. 2026; 2(1): 555578.

76. Emin Taner ELMAS, "Engineering Design and Operational Analysis of Cardiopulmonary Bypass (CPB) Machines with the 5th Law of Thermodynamics and ELMAS's Theory of Thermodynamics", Universal Library of Medical and Health Sciences, 2026; 4(3): 52-62. DOI: <https://doi.org/10.70315/uloap.ulmhs.2026.0403003>.
77. Emin Taner ELMAS, "Designing a Next-Generation Smart Artificial Cornea from the Perspective of Bio-Robotic Resonance and Medical Thermodynamics: A Multidisciplinary Engineering Approach", Universal Library of Medical and Health Sciences, 2026; 4(2): 45-57. DOI: <https://doi.org/10.70315/uloap.ulmhs.2026.0402005>.
78. Emin Taner Elmas (2026) Technical Design Study of a Mobile Portable (Movable), Home-Type (Domestic) Hemodialysis Machine Working as an Artificial Kidney. Journal of Internal Medicine Research & Reports. SRC/JIMRR-171. DOI: [doi.org/10.47363/JIMRR/2026\(5\)155](https://doi.org/10.47363/JIMRR/2026(5)155)
79. ELMAS, E. T. (2026) The Relationship and Treatment of Autoimmune Diseases, Particularly Thyroid Diseases, with Stress: Bio-robotic Resonance and Thermodynamical Interaction with Analogy of Frequency-Resonance Setting Formation Method and the Use of the 5th Law of Thermodynamics within the Scope of ELMAS's Theory of Thermodynamics and ELMAS's Equation. *J Psychol Neurosci*; 8(3):1-20.
80. ELMAS, Emin Taner. (2026). Scientific, Technical and Economic Analysis and Feasibility Study of a Domestic Medical Factory that will Design and Manufacture Intensive Care Life Support Units, Medical Devices and Machinery Using Domestic and National Resources. In INSR Journal of Mathematics, Science and Technology Education (Vol. 2, Number 6, pp. 1-23). <https://doi.org/10.5281/zenodo.20690647>
81. Elmas, E. T. (2026). ELMAS thermodynamic theory and FM-modulated biorobotic resonance approach for the early diagnosis and treatment of pancreatic cancer. *Frontiers in Research*, 6(3), 186-203. <https://doi.org/10.71350/30624533144>
82. Emin Taner Elmas; Modern Approaches in Engineering, Book Chapter 5: –"Elmas's Theory of Thermodynamics" and "The 5th Law of Thermodynamics" Based Diagnosis and Medical Treatment of Pancreatic Cancer – Part 1: ("Elmas Medi-Bio-Energy Tronic" Medical Device System Design Study: Methodological System Design for Medical Treatment Linked to FM-Modulated Bio-Robotic Resonance and Thermodynamic Interaction, Based on the Principles of "Elmas's Theory of Thermodynamics" and "The 5th Law of Thermodynamics," for Pancreatic Cancer Diagnosis), 2026, Vizetek Publishing, Ankara, E-ISBN: 978-625-382-319-1, DOI: 10.54637/Vizetek.9786253823191, Editor: Assoc. Prof. Dr. Emre Arabacı
83. Emin Taner Elmas; Modern Approaches in Engineering, Book Chapter 6: –"Elmas's Theory of Thermodynamics" and "The 5th Law of Thermodynamics" Based Diagnosis and Medical Treatment of Pancreatic Cancer – Part 2: ("Elmas Medi-Bio-Energy Tronic" Medical Device System Design Study: Methodological System Design for Medical Treatment Linked to FM-Modulated Bio-Robotic Resonance and Thermodynamic Interaction, Based on the Principles of "Elmas's Theory of Thermodynamics" and "The 5th Law of Thermodynamics," for Pancreatic Cancer Diagnosis, with Artificial Intelligence Integration), 2026, Vizetek Publishing, Ankara, E-ISBN: 978-625-382-319-1, DOI: 10.54637/Vizetek.9786253823191, Editor: Assoc. Prof. Dr. Emre Arabacı
84. Emin Taner Elmas; International Research in the Field of Mechanical Engineering-V; Book Chapter:"Elmas's Theory of Thermodynamics and Hemodynamics the 5th Law of Thermodynamics within Hemodynamic Principles," Together with the Artificial Blood Model and the Ideal "Super Blood" Model (Optimized Homeostasis), 2026, Eğitim Publishing House, Isbn: 978-625-8824-24-7 E-Isbn: 978-625-8824-25-4, Editor: Prof. Dr. Murat Makaracı
85. Emin Taner Elmas; International Research in the Field of Mechanical Engineering-V; Book Chapter, Innovative Medical Technique Applications in Mechanical Engineering Using "Mechanical Rehabilitation" and "Bionic Artificial Organs", 2026, Eğitim Publishing House, Isbn: 978-625-8824-24-7 E-Isbn: 978-625-8824-25-4, Editor: Prof. Dr. Murat Makaracı
86. Emin Taner ELMAS, "Closed-Loop Feedback Bio-Robotic Resonance Method and FM Modulated Smart Drug Algorithm Based on the 5th Law of Thermodynamics in Glioblastoma - Brain Cancer - Treatment", 10.43681/Limite.2026.V16I6.72701, Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 7, 2026
87. Elmas, E. T., &Akçin, F. (2026). Early Detection and Targeted Treatment of Colorectal Cancer Using an ELMAS-Based, AI- and Nanotechnology-Assisted Multilayer Smart Drug System. *Advanced Research Journal*, 13(4), 10-50. <https://doi.org/10.71350/30621925123>
88. Emin Taner ELMAS, ELMAS's Theory of Medical Thermodynamics and the Fifth Law of Thermodynamics Based Closed-Loop Feedback Bio-Robotic Resonance Method and FM Modulated Smart Drug Algorithm in Glioblastoma - Brain Cancer Treatment, Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 7 2026

89. Elmas, E. T., & Akçin, F. (2026). From Wearable Sensing to Digital Twins: A Critical Narrative Review and Design Framework for Artificial Intelligence-Enabled Early Detection, Telemonitoring, and Risk Stratification in Pulmonary Hypertension. *Cardiology and Angiology: An International Journal*, 15(3), 110–135. <https://doi.org/10.9734/ca/2026/v15i3558>
90. ELMAS, Emin Taner. (2026). Scientific, Technical and Economic Analysis and Feasibility Study of a Domestic Medical Factory that will Design and Manufacture Intensive Care Life Support Units, Medical Devices and Machinery Using Domestic and National Resources. In *INSR Journal of Mathematics, Science and Technology Education* (Vol. 2, Number 6, pp. 1–23). <https://doi.org/10.5281/zenodo.20690647>
91. Emin Taner ELMAS, Melahat BATU AĞIRKAYA, Scientific, Technical, and Economic Analysis and Feasibility Study of a Domestic Medical Factory to Design and Manufacture Intensive Care Life Support Units, Medical Devices, and Machines Using Domestic and National Resources, *(A comprehensive scientific, technical, and economic analysis and feasibility study on the establishment of a domestic medical factory focused on designing and manufacturing intensive care life support units, alongside other medical devices and machinery utilizing national resources and domestic capabilities)*, *Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 8 2026, DOI: 10.43681/Limite.2026.V16I8.72801*
92. Emin Taner ELMAS, Feyyaz AKÇİN, “Combined Smart Gastric Capsule -1”: Extraction of Active Ingredients from İğdır Thyme and İğdır Licorice — Plants Grown in İğdır Province — via Supercritical CO₂ Extraction, and Production of Domestic and National Smart Drugs for Gastric Ulcers and Helicobacter Pylori (*H. pylori*): Literature-Based Scientific Rationale and Proposed R&D Methodology, “Combined Smart Gastric Capsule”: Extraction of Active Ingredients from İğdır Thyme and İğdır Licorice Plants Grown in İğdır Province via Supercritical CO₂ Extraction and Production of Domestic and National Smart Drugs for Gastric Ulcers and Helicobacter Pylori (*H. pylori*): Literature-Based Scientific Rational and Proposed R&D Methodology, *Journal of Systems Engineering and Electronics* (ISSN NO: 1671-1793) Volume 36 ISSUE 7 2026, DOI:20.14118.jsee.2026.V36I7.2486
93. Emin Taner ELMAS, Feyyaz AKÇİN, Biyotik Biyoyapay Akciğer Modelinin Tasarımı, Mühendisliğe Üretimi: ELMAS'ın Termodinamik Kanser Teorisi ile Termodinamiğin Beşinci Yasası, *Biyorobotik/Alan Tabanlı Tedavive Canlı Doku Akciğer Mühendisliğini Kapsayan Entegre Bir Araştırma Çerçevesi, (Design, Engineering, and Manufacturing of a Bionic Bioartificial Lung Model: An Integrated Framework Research Spanning ELMAS's Thermodynamic Cancer Theory together with Fifth Law of Thermodynamics, Biorobotic/Field-Based Treatment, and Living-Tissue Lung Engineering)*, *Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 8 2026, DOI: 10.43681/Limite.2026.V16I8.72803*
94. Emin Taner ELMAS, Feyyaz AKÇİN, Yapay Zekâ Destekli Süperkritik CO₂ Ekstraksiyonu, Karşılaştırmalı Fitokimyasal Karakterizasyon ve Alzheimer Hastalığı için Safran (*Crocus sativus L.*) Biyoaktiflerinin Nanomühendislik Temelli Akıllı İlaç Salım Sistemleri (Artificial Intelligence-Guided Supercritical CO₂ Extraction, Comparative Phytochemical Characterization and Nanoengineered Smart Drug Delivery of Saffron (*Crocus sativus L.*) Bioactives for Alzheimer's Disease), *Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 8 2026, DOI: 10.43681/Limite.2026.V16I8.72804*
95. Elmas, E. T., & Dağ, İ. (2026). Termal ve Akışkan Bilimleri Açısından Alzheimer Hastalığının Navier-Stokes Denklemleri ile Modellenmesi, Erken Teşhis ve Tedavi Yaklaşımları. In *INSR Journal of Multidisciplinary Studies* (Vol. 2, Number 8, pp. 34–47). <https://doi.org/10.5281/zenodo.22099444>
96. Elmas ET, The integration of “ELMAS's Theory of Thermodynamics” and “5th Law of Thermodynamics” into ECMO (Extracorporeal Membrane Oxygenation) Machine Design and Validation. *J Med Clin Case Stu.* 2026;2(1):1-9.
97. E T ELMAS (2026). Türk Halk Müziği İcracılığında “ELMAS Modeli” ve “ELMAS Eklü”: Emin Taner Elmas'ın Ses, Tavrı ve Akort Metodolojisine Disiplinlerarası Bir Yaklaşım ve Karpal Tünel Sendromu. OS Publications. 2026 August; 4(3): 194-206.
98. Emin Taner ELMAS, Mathematical Formulation of ELMAS's Theory of Thermodynamics and the Fifth Law in Medical Thermodynamic Applications, *Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 9 2026, DOI: 10.43681/Limite.2026.V16I9.72906*
99. Emin Taner ELMAS, ELMAS'ın Termodinamik Teorisi ve Termodinamiğin Beşinci Yasası Işığında FM Modüle Edilmiş Biyo-Robotik Rezonans ve Termodinamik Etkileşim Metodunun Matematiksel Formülasyonu ile Diferansiyel Denklemi, *Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 9 2026, DOI: 10.43681/Limite.2026.V16I9.72907*

100. Emin Taner ELMAS, Mathematical Formulation and Differential Equation of FM Modulated Bio-Robotic Resonance and Thermodynamic Interaction Method in Light of ELMAS's Thermodynamic Theory and the Fifth Law of Thermodynamics, Limite Journal | ISSN:1888-4067/E-ISSN:2253-7929, Volume 16 Issue 9 2026, DOI: 10.43681/Limite.2026.V16I9.72908
101. Emin Taner ELMAS, "Comprehensive Thermodynamic Re-evaluation of Ebola Virus Pathogenesis: Interdisciplinary Mechanistic Solutions via the ELMAS's Theory of Thermodynamics and the 5th Law of Thermodynamics", Universal Library of Medical and Health Sciences, 2026; 4(3): 106-116. DOI: <https://doi.org/10.70315/uloap.ulmhs.2026.0403009>.