



## **FABIAN NATANAEL MURRIETA RICO**

### **Datos Generales**

**Nombre:** FABIAN NATANAEL MURRIETA RICO

**Máximo nivel de estudios:** DOCTORADO

**Antigüedad académica en la UNAM:** 0 años, 4 meses, 1 día

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### **Nombramientos**

**Último:** AYUDANTE PROFESOR B TP No Definitivo  
Centro de Nanociencias y Nanotecnología en la  
UNAM  
Desde 01-10-2018 hasta 31-01-2019

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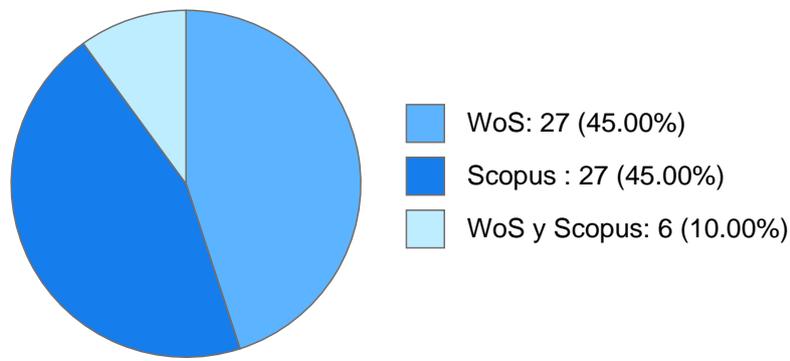
### **Estímulos, programas, premios y reconocimientos**

SNI I 2022 - 2023  
SNI C 2019 - 2021

**FABIAN NATANAEL MURRIETA RICO**

**DOCUMENTOS EN REVISTAS**

**Histórico de Documentos**



#	Título	Autores	Revista	Año
1	Theoretical study of the electronic and optical properties of a composite formed by the zeolite NaA and a magnetite cluster	JOEL ANTUNEZ GARCIA VITALI PETRANOVSKI AFANASIEVNA H'LINH HMOK et al.	BEILSTEIN JOURNAL OF NANOTECHNOLOGY	2025
2	Investigating patterns in aluminum distribution and stability in mordenite zeolite structure: Analysis and theoretical conclusions from existing experimental data	JOEL ANTUNEZ GARCIA VITALI PETRANOVSKI AFANASIEVNA FABIAN NATANAEL MURRIETA RICO et al.	JOURNAL OF SOLID STATE CHEMISTRY	2024
3	Textile Functionalization Using LTA and FAU Zeolitic Materials	FABIAN NATANAEL MURRIETA RICO ROSARIO ISIDRO YOCUPICIO GAXIOLA JOEL ANTUNEZ GARCIA et al.	POLYMERS	2023
4	One-Pot Synthesis of Iron-Modified Zeolite X and Characterization of the Obtained Materials	FABIAN NATANAEL MURRIETA RICO JOEL ANTUNEZ GARCIA ROSARIO ISIDRO YOCUPICIO GAXIOLA et al.	CATALYSTS	2023
5	Frequency Response Analysis of FAU, LTA and MFI Zeolites Using UV-Vis and Electrochemical Impedance Spectroscopy	FABIAN NATANAEL MURRIETA RICO JOEL ANTUNEZ GARCIA ROSARIO ISIDRO YOCUPICIO GAXIOLA et al.	Optics	2023

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6	First-Principles Study of Optical Properties of Linde-Type A Zeolite	MUFEI XIAO WU ARMANDO REYES SERRATO VITALI PETRANOVSKI AFANASIEVNA et al.	PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS	2023
7	Aluminum distribution in mordenite-zeolite framework: A new outlook based on density functional theory calculations	JOEL ANTUNEZ GARCIA DONALD HOMERO GALVAN MARTINEZ VITALI PETRANOVSKI AFANASIEVNA et al.	JOURNAL OF SOLID STATE CHEMISTRY	2022
8	Basic Aspects in the Application of QCMs as Sensors: A Tutorial	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA DONALD HOMERO GALVAN MARTINEZ et al.	IEEE SENSORS JOURNAL	2022
9	Zeolites as initial structures for the preparation of functional materials	FABIAN NATANAEL MURRIETA RICO JOEL ANTUNEZ GARCIA ROSARIO ISIDRO YOCUPICIO GAXIOLA et al.	Journal Of Applied Research And Technology	2022
10	Analysis of the effect of crystallization time during growth on the properties of zeolite LTA film on quartz substrates	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA JOEL ANTUNEZ GARCIA et al.	INTERNATIONAL CONFERENCES & EXHIBITION ON NANOTECHNOL OGIES, ORGANIC ELECTRONICS & NANOMEDICINE, NANOTEXNOLO GY 2020, PT 1	2022
11	Study of Electric and Magnetic Properties of Iron-Modified MFI Zeolite Prepared by a Mechanochemical Method	FABIAN NATANAEL MURRIETA RICO JOEL ANTUNEZ GARCIA ROSARIO ISIDRO YOCUPICIO GAXIOLA et al.	Materials	2022
12	Evaluation of naturally synthesized ZnO for sensing applications using EIS	FABIAN NATANAEL MURRIETA RICO Luque M. Romo-Cardenas G. et al.	INTERNATIONAL CONFERENCES & EXHIBITION ON NANOTECHNOL OGIES, ORGANIC ELECTRONICS & NANOMEDICINE, NANOTEXNOLO GY 2020, PT 1	2021

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13	Zeolites with quantum dots as functional materials: current trends and perspectives for optical devices	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA DONALD HOMERO GALVAN MARTINEZ et al.	Proceedings Of The IEEE International Symposium On Industrial Electronics	2021
14	Analytical solution to Scholte's secular equation for isotropic elastic media	DONALD HOMERO GALVAN MARTINEZ JONATHAN GUERRERO SANCHEZ FABIAN NATANAEL MURRIETA RICO et al.	REVISTA MEXICANA DE FISICA	2021
15	QCM modified with FAU zeolite nanostructures for analysis of temperature induced adsorbed mass changes	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA DONALD HOMERO GALVAN MARTINEZ et al.	Measurement	2021
16	Electrochemical impedance characterization of ZnO semiconductor nanoparticles biosynthesized with <i>Verbascum thapsus</i>	FABIAN NATANAEL MURRIETA RICO M. E. Martínez-Rosas H. E. Garrafa-Galvez et al.	JOURNAL OF MATERIALS SCIENCE-MATER IALS IN ELECTRONICS	2021
17	Facile Zinc Oxide Nanoparticle Green Synthesis Using Citrus <i>reticulata</i> Extract for Use in Optoelectronic Sensors	ALFREDO RAFAEL VILCHIS NESTOR FABIAN NATANAEL MURRIETA RICO Priscy A. Luque et al.	IEEE SENSORS JOURNAL	2021
18	Frequency Shifts Estimation for Sensors Based on Optoelectronic Oscillators	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA DONALD HOMERO GALVAN MARTINEZ et al.	IEEE SENSORS JOURNAL	2021
19	The effect of chemical composition on the properties of LTA zeolite: A theoretical study	JOEL ANTUNEZ GARCIA DONALD HOMERO GALVAN MARTINEZ VITALI PETRANOVSKI AFANASIEVNA et al.	COMPUTATIONA L MATERIALS SCIENCE	2021
20	Prospects for Further Development of Face Masks to Minimize Pandemics Functionalization of Textile Materials with Biocide Inorganic Nanoparticles: A Review	VITALI PETRANOVSKI AFANASIEVNA JOEL ANTUNEZ GARCIA GABRIEL ALONSO NUÑEZ et al.	IEEE LATIN AMERICA TRANSACTIONS	2021
21	Evaluation of electrochemical properties of zinc oxide based semiconductor nanoparticles biosynthesized with <i>Mentha spicata</i> for optoelectronic applications	FABIAN NATANAEL MURRIETA RICO O. Nava M. E. Martínez-Rosas et al.	MATERIALS LETTERS	2020

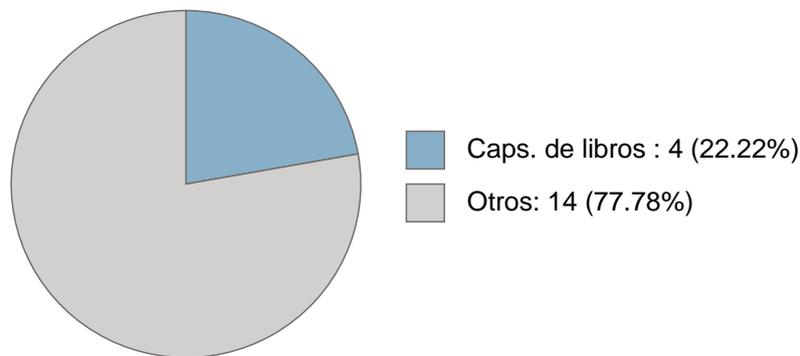
**FABIAN NATANAEL MURRIETA RICO**

22	Phase effect in frequency measurements of a quartz crystal using the pulse coincidence principle	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA DONALD HOMERO GALVAN MARTINEZ et al.	Proceedings Of The Ieee International Symposium On Industrial Electronics	2020
23	Local structures of two-dimensional zeolites?mordenite and ZSM-5?probed by multinuclear NMR	FABIAN NATANAEL MURRIETA RICO DONALD HOMERO GALVAN MARTINEZ VITALI PETRANOVSKI AFANASIEVNA et al.	Molecules	2020
24	Theoretical study of the effect of isomorphous substitution by Al <sup>3+</sup> and/or Fe <sup>3+</sup> cations to tetrahedral positions in the framework of a zeolite with erionite topology	DONALD HOMERO GALVAN MARTINEZ VITALI PETRANOVSKI AFANASIEVNA FABIAN NATANAEL MURRIETA RICO et al.	JOURNAL OF MATERIALS SCIENCE	2019
25	Effect of phase in fast frequency measurements for sensors embedded in robotic systems	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA JOEL ANTUNEZ GARCIA et al.	INTERNATIONAL JOURNAL OF ADVANCED ROBOTIC SYSTEMS	2019
26	Experimental analysis of measurement process for a QCM using the pulse coincidence method	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA Oleg Sergiyenko et al.	Ieee Industrial Electronics Society	2019
27	Constraints definition and application optimization based on geometric analysis of the frequency measurement method by pulse coincidence	FABIAN NATANAEL MURRIETA RICO Avalos-Gonzalez D. Sergiyenko O. et al.	Measurement	2018
28	Exact laser beam positioning for measurement of vegetation vitality	FABIAN NATANAEL MURRIETA RICO Lindner L. Sergiyenko O. et al.	IND ROBOT	2017
29	Mobile robot vision system using continuous laser scanning for industrial application	FABIAN NATANAEL MURRIETA RICO Lindner L. Sergiyenko O. et al.	IND ROBOT	2016

## FABIAN NATANAEL MURRIETA RICO

### LIBROS Y CAPITULOS CON ISBN

#### Obras con registro ISBN



#	Título	Autores	Alcance	Año	ISBN
1	Evaluation of Time/Phase Parameters in Frequency Measurements for Inertial Navigation Systems	FABIAN NATANAEL MURRIETA RICO Mercorelli P. Rodriguez-Quinonez J.C. et al.	Conferenc e Paper	2022	9781665482400
2	Obstacle Coordinates Transformation from TVS Body-Frame to AGV Navigation-Frame	FABIAN NATANAEL MURRIETA RICO Garcia-Gutierrez X.D.J. Alaniz-Plata R. et al.	Conferenc e Paper	2022	9781665482400
3	Zeolites as functional materials in the development of sensors	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA JOEL ANTUNEZ GARCIA et al.	Capítulo de un Libro	2022	9798886972412
4	Optoelectronic devices fusion in machine vision applications	FABIAN NATANAEL MURRIETA RICO Flores-Fuentes W. Rivas-Lopez M. et al.	Capítulo de un Libro	2021	9781799865247
5	Advances in laser scanners	FABIAN NATANAEL MURRIETA RICO Lindner L. Sergiyenko O. et al.	Capítulo de un Libro	2021	9781799865247

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6	Reduction of the Relative Positioning Error of a Machine Vision System Using Friction Compensation	FABIAN NATANAEL MURRIETA RICO Nunez-Lopez J.A. Castro Toscano M.J.	Conferenc e Paper	2021	9781728190235
7	Phase effect in frequency measurements of a quartz crystal using the pulse coincidence principle	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA DONALD HOMERO GALVAN MARTINEZ et al.	Conferenc e Paper	2020	9781728156354
8	Transimpedance Amplifier for Laser Scanning System Range Extension	FABIAN NATANAEL MURRIETA RICO Corpus I.Y.A. Lindner L. et al.	Conferenc e Paper	2020	9781728156354
9	Analysis of Spatial Localization Trough Frequency Counting for Accelerometers Embedded in INS	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA Sanchez-Lopez J.D.D. et al.	Conferenc e Paper	2019	9781728136660
10	Experimental analysis of measurement process for a QCM using the pulse coincidence method	FABIAN NATANAEL MURRIETA RICO VITALI PETRANOVSKI AFANASIEVNA Sergiyenko O. et al.	Conferenc e Paper	2019	9781728148786
11	Defining the Final Angular Position of DC Motor shaft using a Trapezoidal Trajectory Profile	FABIAN NATANAEL MURRIETA RICO Reyes-García M. Sergiyenko O. et al.	Conferenc e Paper	2019	9781728136660
12	Stereoscopic vision systems in machine vision, models, and applications	FABIAN NATANAEL MURRIETA RICO Ramírez-Hernández L.R. Rodríguez-Quiñonez J.C. et al.	Capítulo de un Libro	2019	9783030225872
13	Application of fast frequency shift measurement method for INS in navigation of drones	FABIAN NATANAEL MURRIETA RICO Avalos-Gonzalez D. Hernandez-Balbuena D. et al.	Conferenc e Paper	2018	9781509066841
14	Reduction of angular position error of a machine vision system using the digital controller LM629	FABIAN NATANAEL MURRIETA RICO Reyes-García M. Lindner L. et al.	Conferenc e Paper	2018	9781509066841



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15	Online SHM Optical Scanning Data Exchange	FABIAN NATANAEL MURRIETA RICO Flores-Fuentes W. Rivas-López M. et al.	Conferenc e Paper	2016	9781509008735
16	Continuous 3D scanning mode using servomotors instead of stepping motors in dynamic laser triangulation	FABIAN NATANAEL MURRIETA RICO Lindner L. Sergiyenko O. et al.	Conferenc e Paper	2015	9781467375542
17	Outlier mining of a vision sensing databasefor SVM regression improvement	FABIAN NATANAEL MURRIETA RICO Flores-Fuentes W. Hernandez-Balbuena D. et al.	Conferenc e Paper	2015	9781479917624
18	Accuracy improvement of vision system for mobile robot navigation by finding the energetic center of laser signal	FABIAN NATANAEL MURRIETA RICO Basaca-Preciado L.C. Rodriguez-Quinonez J.C. et al.	Conferenc e Paper	2014	9781479940325



**Sistema Integral de Información Académica**  
**Coordinación de Planeación, Evaluación y**  
**Simplificación de la Gestión Institucional**  
**Reporte individual**



**FABIAN NATANAEL MURRIETA RICO**

**PARTICIPACIÓN EN PROYECTOS**

**No se encuentran registros en la base de datos de SISEPRO asociados a:**

**FABIAN NATANAEL MURRIETA RICO**



**Sistema Integral de Información Académica**  
**Coordinación de Planeación, Evaluación y**  
**Simplificación de la Gestión Institucional**  
**Reporte individual**



**FABIAN NATANAEL MURRIETA RICO**

**PARTICIPACIÓN EN TESIS**

**No se encuentran registros en la base de datos de TESIUNAM asociados a:**

**FABIAN NATANAEL MURRIETA RICO**



**Sistema Integral de Información Académica**  
**Coordinación de Planeación, Evaluación y**  
**Simplificación de la Gestión Institucional**  
**Reporte individual**



**FABIAN NATANAEL MURRIETA RICO**

**DOCENCIA IMPARTIDA**

**No se encuentran registros en la base de datos de DGAE asociados a:**

**FABIAN NATANAEL MURRIETA RICO**



**Sistema Integral de Información Académica**  
**Coordinación de Planeación, Evaluación y**  
**Simplificación de la Gestión Institucional**  
**Reporte individual**



**FABIAN NATANAEL MURRIETA RICO**

**PATENTES**

**No se encuentran registros en la base de datos de patentes asociados a:**

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**FUENTES DE INFORMACIÓN**

**Internos**

#	Información	Fuente	Sistema	Periodo
1	Grupos ordinarios y resumen de historias académicas	DGAE	SIAE	2008-2025
2	Nombramientos, datos generales, estímulos, premios y reconocimientos	DGAPA	RUPA	2008-2025
3	Producción Académica	CH	Humanindex	2008-2021
4	Producción Académica	CIC	SCIC	2000-2017
5	Proyectos	DGPO	SISEPRO	2018-2022
6	Tesis	DGB	TESIUNAM	2008-2025
7	Tutorías en Posgrado	CGEP	SIIPosgrado	2008-2021

**Externos**

#	Información	Fuente	Sistema	Periodo
8	Documentos Indexados	Elsevier	Scopus	2008-2025
9	Documentos Indexados	Thomson Reuters	WoS	2008-2025
10	Obras con registro ISBN	INDAUTOR	Agencia ISBN	2008-2025
11	Patentes	IMPI	SIGA	2008-2024