Personal Data

Name	Salah Mohamed Knani
Department	Physics
Nationality	Tunisian
Date	20/04/1977
Official Email	saleh.kenani@nbu.edu.sa
Phone	0500886582

Language proficiency

Language	Read	Write	Speak
Arabic	Very good	Very good	Very good
English	Very good	Very good	Very good
French	Very good	Very good	Very good

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of issue	Address
2007	PhD	Reims/French	Statistical Physics
2002	Master	Monastir/Tunisia	Physics
2000	B. Sc.	Monastir/Tunisia	Physics

PhD, Master or Fellowship Research Title

PhD	Contribution to the Study of Sweet Taste Molecules via Adsorption Process. Modeling by Statistical Physics
Master	Modeling of taste response curves using statistical physics treatment and adsorption isotherm phenomenon

Professional Record(Beginning with the most recent)

Job Rank	Place And Address of work	Date
Assistant Professor	College of Science/Northern Border University	2015-up to now
Assistant Professor	Higher Institute of Applied Sciences and technology of Sousse/University of Sousse	2008-2015
Assistant teacher of physics	Higher Institute of Applied Sciences and technology of Sousse/University of Sousse	2005-2008

Management Position(Beginning with the most recent)

Administrative position	The disk	Date

Scientific Achievements (Published Refereed Scientific Research)

Name of Investigators	Research Title	Publisher and Date of Application
M. CF da Silva, C. Schnorr, S. F Lütke, S. Knani, V. X Nascimento, É. C Lima, P. Thue, J. Vieillard, L. FO Silva, G. L Dotto	KOH activated carbons from Brazil nut shell: preparation, characterization, and their application in phenol adsorption	Chemical Engineering Research and Design (2022)
G. S dos Reis, D. Pinto, É. C Lima, S. Knani, A. Grimm, L. FO Silva, T. RS Cadaval Jr, G. L Dotto	Lanthanum uptake from water using chitosan with different configurations	Reactive and Functional Polymers (2022)
M. D da Silva, K. da Boit Martinello, S. Knani, S. F Lütke, L. MM Machado, C. Manera, D. Perondi, M. Godinho, G. C Collazzo, L. FO Silva, G. L Dotto	Pyrolysis of citrus wastes for the simultaneous production of adsorbents for Cu (II), H2, and d-limonene	Waste Management (2022)
I. Ben Khemis, H. Smati, F. Aouaini, S. Knani, A. Ben Lamine	Interpretation the olfactory perception of musk tibetene, muscone and dihydrocivetone on the human musk olfactory	Journal of Molecular Liquids (2022)

	receptor OR5AN1 via an advanced statistical physics modeling	
M. Ben Yahia, M. Ben Yahia, F. Aouaini, S. Knani, H. Al-Ghamdi, E. S. Almogait, A. Ben Lamine	Adsorption of sodium and lithium ions onto helicenes molecules: Experiments and phenomenological modeling	Journal of Molecular Liquids (2019)
M. Ben Yahia, S. Knani, Layla Ben Haj Hsan, M. Ben Yahia, Hbib Nasri, A. Ben Lamine	Statistical studies of adsorption isotherms of iron nitrate and iron chloride on a thin layer of porphyrin	Journal of Molecular Liquids (2017)
M. Ben Yahia, M. Tounsi, F. Aouaini, S. Knani, M. Ben Yahia and A. Ben Lamine	A statistical physics study of the interaction of [7]-helicene with alkali cations (K+ and Cs+): new insights on microscopic adsorption behavior	RSC Advances (2017)
S. Wjihi, A. Erto, S. Knani, A. Ben Lamine	Investigation of adsorption process of benzene and toluene on activated carbon by means of grand canonical ensemble	Journal of Molecular Liquids (2017)
S. Wjihi, J. Yang, L. Sellaoui, S. Knani, A. Ben Lamine	Interpreting the hydrogen adsorption on organic groups functionalized MOF-5s by statistical physics model	International Journal of Hydrogen Energy (2017)
S. Wjihi, L. Sellaoui, M. Bouzid, H. Dhaou, S. Knani, A. Jemni, A Ben Lamine	Theoretical study of hydrogen sorption on LaNi5 using statistical physics treatment: microscopic and macroscopic investigation	International Journal of Hydrogen Energy (2017)
M. Ben Yahia, L. Ben Haj Hsan, S. Knani, M. Ben Yahia, H. Nasri, A. Ben Lamine	Modeling of adsorption isotherms of zinc nitrate on a thin layer of porphyrin	Journal of Molecular Liquids (2016)
N. Mechi, I. Ben Khemis, H. Dhaou, S. Knani, A. Jemni, A. Ben Lamine	A macroscopic investigation to interpret the absorption and desorption of hydrogen in LaNi4.85Al0.15 alloy using the grand canonical ensemble	Fluid Phase Equilibria (2016)
L. Sellaoui, G. L. Dotto, J. O. Gonçalves, Luiz A.A. Pinto, S. Knani, A. Ben Lamine	Equilibrium modeling of single and binary adsorption of Food Yellow 4 and Food Blue 2 on modified chitosan using a statistical physics theory: new microscopic interpretations	Journal of Molecular Liquids (2016)
F. Aouaini, S. Knani, M. Ben Yahia, N. Bahloul, A. Ben Lamine and N. Kechaou	New insights on energetic analysis of water adsorption isotherms of the Pelargonium graveolens:	RSC Advances (2016)

	modeling, interpretations and pore sizes distribution based on statistical physics approach	
N. Mechi, L. Sellaoui, I. Ben Khemis, H. Dhaou, S. Knani, A. Jemni, A. Ben Lamine	A microscopic study of absorption and desorption of hydrogen in LaNi4.85Al0.15 using the grand canonical ensemble of statistical physics	Fluid Phase Equilibria (2016)
S. Wjihi, M. Bouzid, L. Sellaoui, S. Knani, H. Dhaou, A. Jemni, A. Ben Lamine	P-C isotherms of LaNi4.75Fe0.25 alloy at different temperatures statistical physics modeling of hydrogen sorption onto LaNi4.75Fe0.25: Microscopic interpretation and thermodynamic potential investigation	Fluid Phase Equilibria (2016)
L. Sellaoui, T. Depci, A. R. Kul, S. Knani, A. Ben Lamine	A new statistical physics model to interpret the binary adsorption isotherms of lead and zinc on activated carbon	Journal of Molecular Liquids (2016)
L. Sellaoui, H. Guedidi, S.Wjihi, L. Reinert, S. Knani, L. Duclaux; A. Ben Lamine	Experimental and theoretical studies of adsorption of ibuprofen on raw and two chemically modified activated carbons: new physicochemical interpretations	RSC Advances (2016)
L. Sellaoui, H. Guedidi, S. Masson, L. Reinert, J. M. Levêque, S. Knani, A. Ben Lamine, M. Khalfaoui, L. Duclaux	Steric and energetic interpretations of the equilibrium adsorption of two new pyridinium ionic liquids and ibuprofen on a microporous activated carbon cloth: Statistical and COSMO-RS models	Fluid Phase Equilibria (2016)
L. Sellaoui, S. Knani, A. Erto, M. A. Hachicha, A. Ben Lamine	Equilibrium Isotherm Simulation of Tetrachlorethylene on Activated Carbon using the Double Layer model with Two Energies: Steric and Energetic Interpretations	Fluid Phase Equilibria (2016)
F. Aouaini, S. Knani, M. Ben Yahia and A. Ben Lamine	Statistical Research of Water Vapor Sorption Isotherm in Food Materials: Steric and energetic interpretations	Sensor Letters (2015)
S. Wjihi, H. Dhaou, M. Ben Yahia, S. Knani, A. Jemni, A. Ben Lamine	Statistical physics modeling of hydrogen desorption from LaNi4.75Fe0.25: Stereographic and energetic interpretations	Physica B (2015)

F. Aouaini, S. Knani, M. Ben Yahia, N. Bahloul, A. Ben Lamine, N. Kechaou	Investigation of Pore Size and Energy Distributions by Statistical Physics Formalism Applied to Agriculture Products	Physica A: Statistical Mechanics and its Applications (2015)
F. Aouaini, S. Knani, M. Ben Yahia and A. Ben Lamine	Statistical Physics Studies of Multilayer Adsorption Isotherm in Food Materials and Pore size distribution	Physica A: Statistical Mechanics and its Applications (2015)
L. Sellaoui, H. Guedidi, S. Knani, L. Reinert, L. Duclaux, A. Ben Lamine	Application of statistical physics formalism to the modeling of adsorption isotherms of ibuprofen on activated carbon	Fluid Phase Equilibria (2015)
G.L. Dotto, L.A.A. Pinto, A. Hachicha, S. Knani	New physicochemical interpretations for the adsorption of food dyes on chitosan films using statistical physics treatment	Food Chemistry (2015)
F. Aouaini, S. Knani, M. Ben Yahia, N. Bahloul, N. Kechaou and A. Ben Lamine	Application of Statistical Physics on the Modeling of Water Vapor Desorption Isotherms	Drying Technology (2014)
S. Knani, F. Aouaini, N. Bahloul, M. Khalfaoui, M. A. Hachicha, A. Ben Lamine and N. Kechaou	Modeling of Adsorption Isotherms of Water Vapor on Tunisian Olive Leaves using Statistical Mechanical Formulation	Physica A: Statistical Mechanics and its Applications (2014)
S. Knani, M. Khalfaoui, M. A. Hachicha, M. Mathlouthi and A. Ben Lamine	Interpretation of psychophysics response curves using statistical physics	Food Chemistry (2014)
M. Ben Yahia, Y. Ben Torkia, S. Knani, M. A. Hachicha, M. Khalfaoui and A. Ben Lamine	Models for Type VI Adsorption Isotherms from a Statistical Mechanical Formulation	Adsorption Science & Technology (2013)
M. Ben Yahia, F. Aouaini, M.A. Hachicha, S. Knani, M. Khalfaoui, A. Ben Lamine	Thermodynamic study of krypton adsorbed on graphite using statistical physics treatment	Physica B (2013)
M. Ben Yahia, S. Knani, H. Dhaou, M. A. Hachicha, A. Jemni and A. Ben Lamine	Modeling and interpretations by the statistical physics formalism of hydrogen adsorption isotherm on LaNi4.75Fe0.25	International Journal of Hydrogen Energy (2013)
M. Khalfaoui, A. Nakhli, S. Knani, H. V. Baouab, A. Ben Lamine	On the Statistical Physics Modeling of Dye Adsorption Onto Anionized Nylon: Consequent New Interpretations	Journal of Applied Polymer Science (2012)
S. Knani, M. Mathlouthi and A. Ben Lamine	Modeling of the Psychophysical Response Curves Using the Grand Canonical Ensemble in Statistical Physics	Food Biophysics (2007)

M. Khalfaoui, S. Knani, M. A. Hachicha and A. Ben Lamine	New Theoretical Expressions for the Five Adsorption Type Isotherms Classified by BET Basing on Statistical Physics Treatment	Journal of Colloid and Interface Science (2003)

Scientific Achievements (Scientific Research accept for publication)

Name of Investigators	Research Title	Date	The magazine
V. X. Nascimento, C. Schnorr, S. F. Lütke, S. Knani, Maria C. F. da Silva, F. M. Machado, É. C. Lima, L. F. O. Silva, J. Vieillard, G. L. Dotto	Application of mesoporous ZSM-5 as an adsorbent material for the removal of naphthenic acid present in oil-produced water	2022	Microporous and Mesoporous Materials
Y. Vieira, J. Pereira Silveira, G. L. Dotto, S. Knani, J. Vieillard, J. Georgin, D. S. P. Franco, E. C. Lima	Mechanistic insights and steric interpretations through statistical physics modelling and density functional theory calculations for the adsorption of the pesticides atrazine and diuron by Hovenia dulcis biochar	2022	Journal of Molecular Liquids

Scientific Achievements(Scientific Research submitted for Arbitration of specialized)

Name of Investigators	Research Title	Plot And Date of publication
M. Ben Yahia, M.A. Hachicha, F. Aouaini, S. Knani, A. Ben Lamine	On the statistical physics of finite multilayer adsorption model on gaseous phase	5th International Renewable Energy Congress (2014)
S. Knani, M. Khalfaoui, M.A. Hachicha, A. Ben Lamine, M. Mathlouthi	Modelling of water vapour adsorption on foods products by a statistical physics treatment using the grand canonical ensemble	6th International Conference on Water in Food (2012)

Scientific Achievements(Finished Research Projects)

Name of Investigators	Research Title	Date Title
S. Knani, N. Mabrouk, S.T. Alanazi, N. Kechaou	Study of moisture adsorption isotherms characteristics of banana and thermodynamic properties using statistical physics formalism	2022
S. Knani, N. Khalifa, M. Ben Yahia, F. Aouaini, M. Tounsi	Statistical physics study of the interaction of the 5, 10, 15, 20-tetrakis (4-tolylphenyl) porphyrin	2020

	(H2TTPP) with magnesium ion: New microscopic interpretations	
S. Knani, N. Mabrouk, M. Tounsi, M. Ben Yahia	Statistical modeling of adsorption isotherm of potassium on aza[7]helicene-coated gold electrode attached to quartz crystal microbalance	2019

Scientific Achievements(Current Research)

Name of Investigators	Research Title
S. Knani, R. Selmi, A. Bouguettoucha, N. Lefi	Gentian violet adsorption onto bio-sorbent Cyp-Car: Statistical physics modeling and consequent interpretations

Scientific Achievements (Contribution to Scientific Conference and symposia)

Conference Title	Place And Date of the Conference	Extent of Contribution
Modeling and Interpretation of Water Vapor Sorption Isotherm on Food Material using Statistical Physics Formalism	International Conference on Innovative Materials and Techniques, Tunisia (2012).	Poster
Modeling of Sorption Isotherms of Water Vapor on Foodstuffs using Statistical Physics	8th Congress Maghreb-Euro Material and Application for Sensors, Tunisia (2012)	Poster
Modeling of water vapor on olive leaves	10th Congress National Research in Physics, Tunisia (2011)	Oral Presentation
Modeling of adsorption isotherms using grand canonical ensemble in statistical physics	SMSTS-3, Morocco (2010)	Oral Presentation

Modeling of water vapor adsorption on foods by using the grand canonical ensemble in a statistical physics treatment	6th International Conference on Water EUROFOODWATER, Frensh (2010)	Oral Presentation
Double layer adsorption model and the interpretation of water soluble carbohydrate taste chemoreception	6th International Conference on Water EUROFOODWATER, Frensh (2010)	Poster
Modélisation des isothermes d'adsorption à l'interface solide/liquide en utilisant l'ensemble grande canonique en physique statistique	7th CNRP, Tunisia (2008).	Poster
Réalisation des isothermes d'adsorption du saccharose sur des supports solides en utilisant une microbalance à quartz	Tu-MRS Matériaux, Tunisie (2007)	Poster
Modeling of the Psychophysical Response Curves Using the Grand Canonical Ensemble in Statistical Physics	7th Annual Meeting of the European Chemoreception Research Organisation, Spain (2006).	Poster
Modeling and Interpretation of Gustatory Response Curves by a Statistical Physics Treatment for Sweet Molecules	7th Annual Meeting of the European Chemoreception Research Organisation, Spain (2006).	Poster
Modélisation des courbes de réponses gustatives par la physique statistique	7th CNRP, Tunisia (2003)	Poster

Scientific Achievements(Membership and Committees participating in)

1-	
2-	
3-	

Teaching Activities(Undergraduate)

Course	Course Number	Extent of Contribution

Brief Description of the Undergraduate Courses taught

1-	
2-	
3-	

Teaching Activities (Scientific Studies)

Course	Course Number	Extent of Contribution

Teaching Activities (academic advising for Student)

Stage	Number of Students	Form	To me

Teaching Activities(Supervision of master and doctoral theses)

Scientific Certificate	The Side	The address	Date

Teaching Activities(Supervision of Ongoing Research)

Scientific Certificate	The Side	The address	Date

Administrative Tasks And Community Service

The Side	Position	Form	To me

Administrative Tasks and Community Service (Committee membership)

The Side	Position	Form	To me

Administrative Tasks and Community Service (Educational Consultancy)

Time-full Partial-time	The Side	Form	To me

Administrative Tasks and Community Service (Volunteer Work)

The Side	Volunteer Type	Form	To me

Voluntary Competencies and Skills

1-	
2-	
3-	