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University of Management and Technology, Lahore

School of Food and Agricultural Sciences

Lahore, Pakistan



## Nauman Khalid, PhD

### Education

- Oct 2012 – Sep 2015*    **The University of Tokyo**  
PhD, Agroinformatics  
Tokyo, Japan
- Oct 2010 – Sep 2012*    **The University of Tokyo**  
MSc, Global Agricultural Sciences  
Tokyo, Japan
- Sep 2005 – Aug 2009*    **PMAS - Arid Agriculture University**  
BSc (Hons) Agriculture Food Technology  
Rawalpindi, Pakistan

### Thesis

*PhD Thesis:* Formulation and characterization of micro/nano emulsion systems encapsulating vitamins and phytochemicals using conventional and microchannel emulsification

*MSc Thesis:* Preparation and characterization of water-in-oil and water-in-oil-in-water emulsions loaded with high concentration of L-ascorbic acid

### Research areas

#### 1. Bioactive and functional food research

Including extraction & separation of bioactives from waste by-product (e.g. antioxidants, functional lipid, collagen, gelatin, carotene and vitamins), evaluating and developing suitable bioactive delivery systems (including microencapsulation) for bioactive components such as omega 3 fatty acids, phytosterols and vitamins.

## 2. Functional Food Product Development

Utilisation of functional food ingredients to formulate value-added and specialty food products; sensory evaluation for product acceptance; relation of food properties and sensory attributes.

## 3. Lipid science and antioxidants

Including emulsion properties and stability, characterization of fats & oils, omega-3 fatty acids, lipid oxidation and antioxidant determination.

## 4. Relation of food properties and processing

Including physicochemical, nutritional, sensory qualities and microbiological safety of foods and both thermal (spray drying, common heating treatment e.g., baking, pan fried) and non-thermal (e.g. high-pressure processing, and microfluidics) processing as well as post-harvest treatment.

## 5. Delineation and Bacterial Taxonomy

Delineation of novel bacterial strains from soil, waste and food resources

## Research and Teaching Experience

|                             |                                                                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Aug 2016-to date</i>     | <b>Associate Professor/Director</b><br>School of Food and Agricultural Sciences<br>University of Management and Technology, Lahore, Pakistan |
| <i>Jan 2018-to May 2018</i> | <b>Visiting Associate Professor</b><br>College of Food and Agriculture<br>UAE University, Al Ain, United Arab Emirates                       |
| <i>Nov 2016-Jan 2017</i>    | <b>Researcher</b><br>Algal Biomass Research and Development Center<br>Tsukuba University, Japan                                              |
| <i>Oct 2015 – Jul 2016</i>  | <b>Researcher</b><br>The Alliance for Research on North Africa (ARENA)<br>Tsukuba University, Japan                                          |
| <i>Oct 2015 –Mar 2016</i>   | <b>Visiting Researcher</b><br>National Food Research Institute, Food Engineering Division<br>Ibaraki, Tsukuba, Japan                         |
| <i>Jan 2012 – Sep 2015</i>  | <b>Research Internee, PhD</b><br>National Food Research Institute, Food Engineering Division<br>Ibaraki, Tsukuba, Japan                      |
| <i>May 2010 – Aug 2010</i>  | <b>Quality Assurance Manager</b><br>Atlantis Premium Waters<br>Islamabad, Pakistan                                                           |
| <i>Mar 2009– Jun 2009</i>   | <b>Internee</b><br>Qarshi Research International, Qarshi Industries (PVT) Ltd.                                                               |

## Management Experience

I established School of Food and Agricultural Sciences at University of Management and Technology. The School was formally approved from University of Management and Technology Academic Council and as well as from HEC, Pakistan in 2017. The School already conducted formal accreditation visit of National Agriculture Education Accreditation Council. The school is in process of getting accreditation from Institute of Food Technologists USA. The School is in process of getting MoUs between different academic institutions and as well as different food processing industries.

I designed new and well managed curriculum of BS Food Science and Technology and BS Dairy Science and Technology. The new curriculum meets the demand of growing economy of Pakistan and well as industrial needs. The curriculum is integrated with different Agriculture oriented subjects that trains the young force with basic agriculture, processing and quality judging tools and expertise.

Recently, the School got NoC to run MS Food Technology from HEC, Pakistan. I have designed case study base approach to teach the professional Food Technologists of Pakistan and as well as students outside Pakistan. The School also offer short courses regarding Halal Food Processing, Quality Assurance, Operation health and safety and other regulatory courses meeting the demand of industries and research institutes.

## Teaching Experience

### **School of Food and Agricultural Sciences, University of Management and Technology, Lahore**

I have been involved in designing new courses and degree programs for SFAS ranging from Food Technology, Dairy Technology and Food Quality Management. I have fully developed new curriculum of Food Technology at both undergraduate and Post graduate level.

### Teaching assignments

1. *FT-107 Introduction to Dairy Technology 3(2-1)*
2. *FT-202 Food Process Engineering 3(3-0)*
3. *DT-713 Dairy Plant Design 2(2-0)*
4. *DT-714 Food Quality Management 3(3-0)*
5. *FT-501 Lab Management, Calculations and Instrumentation 3(2-1)*
6. *FT-717 Special Problem 1(1-0)*
7. *FT-718 Seminar 1(1-0)*

### **Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan**

1. *02RC105 Food Chemistry 4.0 Credits*
2. *02RC106 Food Engineering 4.0 Credits*
3. *02RC107 Bioresource Engineering 4.0 Credits*

**College of Food and Agriculture, UAE University, Al Ain, UAE**

1. *FDSC460 Hazard Analysis Critical Control Point 3.0 Credits*
2. *FDSC465 Food Safety Management 3.0 Credits*
3. *FDSC378 Cereal Technology 3.0 Credits*
4. *FDSC790 Concept Multi FDSC Studies 3.0 Credits*
5. *FDSC319 Food packaging 3.0 Credits*

## Research Statistics

|                                             |          |
|---------------------------------------------|----------|
| <i>ResearchGate Score</i>                   | 39.75    |
| <i>Publications (including proceedings)</i> | 153      |
| <i>Total Impact Points</i>                  | 400      |
| <i>Publication Views</i>                    | 82k      |
| <i>Citations ResearchGate</i>               | 933      |
| <i>Citations google Scholar, H index</i>    | 1119, 16 |
| <i>Citations Web of Science, H index</i>    | 617, 12  |

## Awards & Grants

|                 |                                                                                                                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Jan 2018</i> | Listed as 127 <sup>th</sup> Productive Scientist of Pakistan in Agricultural Sciences and 31 <sup>st</sup> Productive Scientist of Pakistan in Agricultural Sciences under 40 years of age |
| <i>Oct 2017</i> | Best Junior Research Award, Foods Journal, MPDI, AG Basel, Switzerland                                                                                                                     |
| <i>Aug 2017</i> | Institute of Advanced Studies Fellowship, Loughborough University, UK                                                                                                                      |
| <i>Jul 2017</i> | Higher Education Commission, Pakistan approved PhD supervisor                                                                                                                              |
| <i>Feb 2016</i> | Deakin University Australia, approved PhD supervisor                                                                                                                                       |
| <i>Nov 2015</i> | Alfred Deakin Post-Doctoral Research Fellowship, Deakin University, Australia (Success rate < 1%)                                                                                          |
| <i>Oct 2012</i> | Scholarship: The University of Tokyo Fellowship for PhD studies                                                                                                                            |
| <i>Oct 2010</i> | Scholarship: MEXT (Monbukagakusho) for MSc studies                                                                                                                                         |
| <i>Oct 2006</i> | Scholarship: Merit Scholarship for BSc (Hons) studies                                                                                                                                      |

## Research Projects

|                           |       |                                                                                                                                                            |                                                 |              |
|---------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------|
| <i>Dec 2018- on going</i> | Co-PI | Formulation of fortified foods with newly devised biopolymers-based vitamin D nanoemulsions                                                                | 8709/Federal/NRPU/R&D/HEC/2017<br>HEC, Pakistan | Rs.6,807,700 |
| <i>Sep 2016-Aug 2018</i>  | PI    | Formulation and characterization of inexpensive micro/nanoencapsulated delivery system containing astaxanthin using lab-on-a-chip and conventional devices | ID 404087, Deakin University, Australia         | \$ 10,000    |

## Skills & Activities

*Languages*    English, Japanese, Punjabi, Urdu

*Scientific Memberships* Society of Chemical Engineers Japan (Dec 2011- Mar 2013)  
Institute of Food Technologists (Jan 2011-Jan 2012)  
South African Society of Food Science and Technology (Jan 2010-Jan 2011)  
European Federation of Food Science and Technology (Jan 2009-Present)  
International Society of Food Engineering (Jan 2012-Present)  
Japan Society of Food Engineering (Jun 2011-Present)  
International Society of Organic Agriculture Research (Aug 2017-Present)  
Society of Chemical Industry, UK (Feb 2017-Present)

## Publication Highlights

[authors]: [title]. [details]

## Books

1. **Nauman Khalid**, Asif Ahmad, Anwar Ahmed: *Micronutrients deficiencies in 185 million people of pakistan special reference to zinc and iron*. First 01/2012; Lambert Academic Publishing., ISBN: 978-3-8473-0114-1

## Book Chapters

6. **Nauman Khalid**, Hafiz Ansar Rasul Suleria, Iftikhar Ahmed: *Pineapple Juice*. Handbook of Functional Beverages and Human Health, Edited by Fereidoon Shahidi, Cesarettin Alasalvar, 03/2016: chapter 40: pages 489-498; CRC Press., ISBN: 978-146-659641-2
5. Abdelilah El-Abbassi, Sana El Fadeli, Laila El-Bouzidi, Majida Lahrouni, **Nauman Khalid**: *Recent Advances in Microencapsulation of Bioactive Compounds*. Recent Progress in Medicinal Plants: Analytical and Processing Techniques, Edited by J.N. Govil, 03/2015: chapter 8: pages 129-146; Stadium Press LCC, USA., ISBN: 1-62699-078-6
4. Shakira Ghazanfar, **Nauman Khalid**, Iftikhar Ahmed, Muhammad Imran: *Probiotic Yeast: Mode of Action and Its Effects on Ruminant Nutrition*. Yeast - Industrial Applications, Edited by Antonio Morata and Iris Loira; 11/2017; Chapter 8: Page 179-202; Intechopen Science Press. DOI:10.5772/intechopen.70778. ISBN 978-953-51-3599-9
3. Asif Ahmad, **Nauman Khalid**. *Dietary fibers in modern food production: A special perspective with  $\beta$ -glucans*. Biopolymers for food Designs. Book Series: Handbook of Food Bioengineering, Edited by Alexandru Grumezescu Alina Maria Holban, 03/2018: chapter 5: pages 123-154; Academic Press., ISBN: 978-146-659641-2
2. **Nauman Khalid**, Sania Arif, Isao Kobayashi, Mitsutoshi Nakajima: *Lab-on-a-chip techniques for high-throughput proteomics and drug discovery*. Microfluidics for Pharmaceutical Applications, 01/2019: pages 371-422; ISBN: 9780128126592, DOI:10.1016/B978-0-12-812659-2.00014-4
1. Arshia Amin, Iftikhar Ahmed, **Nauman Khalid**, Yao Zhang, Min Xiao, Wen-Jun Li: *Insights into the Thermophile Diversity in Hot Springs of Pakistan*. Extremophiles in Eurasian Ecosystems: Ecology, Diversity, and Applications, 08/2018: Pages 1-28; DOI:10.1007/978-981-13-0329-6\_1

## Journal Publications

### 2019

99. Rao Sanaullah Khan, Waqas Asghar, **Nauman Khalid**, Wahab Nazir, Muhammad Farooq, Iftikhar Ahmed, Qamar Abbas Syed: *Phalsa (*Grewia asiatica* L) fruit berry a promising functional food ingredient: A comprehensive review*. **Journal of Berry Research**, 2019; In Press  
DOI:10.3233/JBR-180332 **I.F. 2.175**

98. Spencer L. James, Alice Theadom, Richard G. Ellenbogen, Marlena S. Bannick, Wcliff Montjoy-Venning, Lydia R. Lucchesi, Nooshin Abbasi, et al.: *Global, regional, and national burden of traumatic brain injury and spinal cord injury, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016*. **The Lancet Neurology**, 2019; 18(1):56-87.  
DOI:10.1016/S1474-4422(18)30415-0 **I.F. 27.138**
97. Yakindra Prasad Timilsena, Taiwo O. Akanbi, **Nauman Khalid**, Benu Adhikari, Colin J. Barrow: *Complex coacervation: Principles, mechanisms and applications in microencapsulation*. **International Journal of Biological Macromolecules**, 2019; 121: 1276-1286  
DOI:10.1016/j.ijbiomac.2018.10.144 **I.F. 3.909**
96. Yiguo Zhao, **Nauman Khalid**, Gaofeng Shu, Marcos A. Neves, Isao Kobayashi, Mitsutoshi Nakajima: *Complex coacervates from gelatin and octenyl succinic anhydride modified kudzu starch: Insights of formulation and characterization*. **Food Hydrocolloids**, 2019; 86: 70-77  
DOI:10.1016/j.foodhyd.2018.01.040. **I.F. 4.754**

## 2018

95. **Nauman Khalid**, Isao Kobayashi, Marcos A. Neves, Kunihiro Uemura, Mitsutoshi Nakajima: *Microchannel emulsification: a promising technique towards encapsulation of functional compounds*. **Critical Reviews in Food Science and Nutrition**. 2018, 58: 2364 - 2385.  
DOI: 10.1080/10408398.2017.1323724. **I.F. 6.077**
94. Rafael Lozano, Nancy Fullman, Degu Abate, et al.: *Measuring progress from 1990 to 2017 and projecting attainment to 2030 of the health-related Sustainable Development Goals for 195 countries and territories: a systematic analysis for the Global Burden of Disease Study 2017*. **The Lancet**, 2018; 392(10159): 2091-2138.  
DOI:10.1016/S0140-6736(18)32281-5 **I.F. 53.254**
93. Daniel Dicker, Grant Nguyen, Degu Abate, Lkidan Hassen Abate, et al.: *Global, regional, and national age-sex-specific mortality and life expectancy, 1950-2017: a systematic analysis for the Global Burden of Disease Study 2017*. **The Lancet**, 2018; 392(10159).  
DOI:10.1016/S0140-6736(18)31891-9 **I.F. 53.254**
92. Christopher J. L. Murray, Charlton S. K. H. Callender, et al.: *Population and fertility by age and sex for 195 countries and territories, 1950–2017: a systematic analysis for the Global Burden of Disease Study 2017*. **The Lancet**, 2018; 392(10159):1995-2051.  
DOI:10.1016/S0140-6736(18)32278-5 **I.F. 53.254**
91. Gregory A Roth, Degu Abate, et al.: *Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017*. **The Lancet**, 2018; 392(10159).  
DOI:10.1016/S0140-6736(18)32225-6 **I.F. 53.254**
90. Hmwe Hmwe Yu, Degu Abate, Kalkidan Hassen Abate et al.: *Global, regional, and national disability-adjusted life-years (DALYs) for 359 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017*. **The Lancet**, 2018; 392(10159):1859-1922.  
DOI:10.1016/S0140-6736(18)32335-3 **I.F. 53.254**

89. Fatima Majeed, Fozia Zahur Malik, Zaheer Ahmed, Asma Afreen, Muhammad Naveed Afzal, **Nauman Khalid**: *Ginseng phytochemicals as therapeutics in oncology: Recent perspectives. Biomedicine & pharmacotherapy*, 2018; 100:52-63.  
DOI:10.1016/j.biopha.2018.01.155. **I.F. 2.759**
  
88. Muhammad Naveed, Zoma Chaudhry, Syeda Aniqah Bukhari, Iqra Awan, Nauman Khalid: *Dengue death tolls: A nightmare for Khyber Pakhtunkhwa, Pakistan. Journal of Infection and Public Health*, 2018; 11: 898–899  
DOI:10.1016/j.jiph.2017.12.002. **I.F. 1.439**
  
87. Waqas Asghar, Wahab Nazir, **Nauman Khalid**: *A Question Mark on Emerging Zinc-Related Nutritional Deficiencies in Pakistani Population. Asia-Pacific Journal of Public Health*. 2018; 30(5): 500-502.  
DOI:10.1177/1010539518786519 **I.F. 1.120**
  
86. Muhammad Naveed, Komal Imran, Ayesha Mushtaq, Abdul Samad Mumtaz, Hussnain A. Janjua, **Nauman Khalid**: *In silico functional and tumor suppressor role of hypothetical protein PCNXL2 with regulation of the Notch signaling pathway. RSC Advances* 2018; 8(38):21414-21430.  
DOI:10.1039/C8RA00589C **I.F. 2.936**
  
85. Nanik Purwanti, Azmi Syahrian Zehn, Eka Dian Pusfitasari, **Nauman Khalid**, Erfin Yundra Febrianto, Sutrisno Suro Mardjan, Andreas, Isao Kobayashi: *Emulsion stability of clove oil in chitosan and sodium alginate matrix. International Journal of Food Properties* 2018; 21: 566–581.  
DOI:10.1080/10942912.2018.1454946 **I.F. 2.936**
  
84. **Nauman Khalid**, Colin J. Barrow: *Critical review of encapsulation methods for stabilization and delivery of astaxanthin. Journal of Food Bioactives* 2018 1 (3), 104–115  
DOI:10.31665/JFB.2018.1129
  
83. Ana Paula Eskildsen Pagano, **Nauman Khalid**, Isao Kobayashi, Mitsutoshi Nakajima, Marcos Antonio Neves, Erick Leite Bastos: *Microencapsulation of betanin in monodisperse W/O/W emulsions. Food Research International* 2018; 109: 489-496  
DOI:10.1016/j.foodres.2018.04.053 **I.F. 3.520**
  
82. Zhang Chen, Gaofeng Shu, Noamane Taarji, Colin J. Barrow, Mitsutoshi Nakajima, Nauman Khalid, Marcos A. Neves: *Glycosides as natural emulsifiers for oil-in-water nanoemulsions loaded with astaxanthin: Insights of formulation, stability and release properties. Food Chemistry* 2018; 261: 322-328  
DOI:10.1016/j.foodchem.2018.04.054 **I.F. 4.946**
  
81. Noamane Taarji, Cezar A. Rabelo da Silva, **Nauman Khalid**, Chemseddoha Gadhi, Abdellatif Hafidi, Isao Kobayashi, Marcos A. Neves, Hiroko Isoda, Mitsutoshi Nakajima: *Formulation and stabilization of oil-in-water nanoemulsions using a saponins-rich extract from argan oil press-cake. Food Chemistry* 2018; 246:457–463.  
DOI:10.1016/j.foodchem.2017.12.008 **I.F. 4.946**
  
80. Gaofeng Shu, **Nauman Khalid**, Tai Boon Tan, Yiguo Zhao, Marcos A. Neves, Isao Kobayashi, Mitsutoshi Nakajima: *In-vitro bioaccessibility of ergocalciferol in nanoemulsion-based delivery system: The influence of food-grade emulsifiers with different stabilizing mechanisms. International Journal of Food Science & Technology*, 2018; 53 (02), 430–440.

DOI:10.1111/ijfs.13601. **I.F. 1.504**

79. Gaofeng Shu, **Nauman Khalid**, Zhang Chen, Marcos A. Neves, Colin J. Barrow, Mitsutoshi Nakajima: *Formulation and characterization of astaxanthin-enriched nanoemulsions stabilized using ginseng saponins as natural emulsifiers*. **Food Chemistry**, 2018; 255: 67-74.

DOI:10.1016/j.foodchem.2018.02.062. **I.F. 4.529**

78. Cezar A.S. Rabelo, Noamane Taarji, **Nauman Khalid**, Isao Kobayashi, Mitsutoshi Nakajima, Marcos A. Neves: *Formulation and characterization of water-in-oil nanoemulsions loaded with açai berry anthocyanins: Insights of degradation kinetics and stability evaluation of anthocyanins and nanoemulsions*. **Food Research International**, 2018; 106:542-548. **I.F. 3.086**

77. Goran T. Vladisavljević, Ekanem E. Ekanem, Zilin Zhang, **Nauman Khalid**, Isao Kobayashi, Mitsutoshi Nakajima: *Long-term stability of droplet production by microchannel (step) emulsification in microfluidic silicon chips with large number of terraced microchannels*. **The Chemical Engineering Journal**, 2018; 333:380-391.

DOI:10.1016/j.cej.2017.09.141. **I.F. 6.216**

## 2017

76. Gaofeng Shu, **Nauman Khalid**, Tai Boon Tan, Yiguo Zhao, Marcos A. Neves, Isao Kobayashi, Mitsutoshi Nakajima: *Comparison of ergocalciferol nanodispersions prepared using modified lecithin and sodium caseinate: Insights of formulation, stability and bioaccessibility*. **Journal of Functional Foods**, 2017; 529, 475-486.

DOI: 10.1016/j.jff.2017.08.047. **I.F. 3.144**

75. Yiguo Zhao, **Nauman Khalid**, Gaofeng Shu, Marcos A. Neves, Isao Kobayashi, Mitsutoshi Nakajima: *Formulation and characterization of O/W emulsions stabilized using octenyl succinic anhydride modified kudzu starch*. **Carbohydrate Polymers**, 2017; 176, 96-98

DOI: 10.1016/j.carbpol.2017.08.064. **I.F. 4.219**

74. Rabia Javed, Iftikhar Ahmed, **Nauman Khalid**, Muhammad Iqbal: *Isolation, Molecular Identification and Characterization of Boron-Tolerant Bacterial Strains from Sewage Treatment Pond of Islamabad, Pakistan*. **Applied Ecology and Environmental Research**, 2017. 15 (4), 1211-1226. **I.F. 0.597**

73. Yigao Zhao, **Nauman Khalid**, Gaofeng Shu, Isao Kobayashi, Marcos A. Neves, Mitsutoshi Nakajima: *Formulation and characterization of oil-in-water emulsions stabilized by gelatinized kudzu starch*. **International Journal of Food Properties**, 2017, 20(S2), 1329-1341.

DOI: 10.1080/10942912.2017.1347675. **I.F. 1.427**

72. **Nauman Khalid**, Isao Kobayashi, Kunihiko Uemura, Mitsutoshi Nakajima: *Fabrication of Asymmetrical Straight-Through Microchannel Emulsification Plate for Production of Small Size Monodispersed Emulsion Droplets*. **Chemical Engineering & Technology**, 2017, 40, 2351-2355.

DOI: 10.1002/ceat.201700077. **I.F. 2.051**

71. **Nauman Khalid**, Gaofeng Shu, Isao Kobayashi, Mitsutoshi Nakajima, Colin J. Barrow: *Formulation and characterization of O/W nanoemulsions encapsulating high concentration of astaxanthin*. **Food Research International**, 2017, 102, 364-371.  
DOI: 10.1016/j.foodres.2017.06.019. **I.F. 3.086**
  
69. Uzair Hashmi, Faria Khan, **Nauman Khalid**, Asad Abdullah Shahid, Aqib Javed, Tehseen Alam, Nasir Jalal, Muhammad Qasim Hayat, Shah Rukh Abbas, Hussnain Ahmed Janjua: *Hydrogels incorporated with silver nanocolloids prepared from antioxidant rich Aerva javanica as disruptive agents against burn wound infections*. **Colloids and Surfaces A Physicochemical and Engineering Aspects**. 2017; 529, 475-486.  
DOI: 10.1016/j.colsurfa.2017.06.036. **I.F. 2.714**
  
68. **Nauman Khalid**, Rao Sanaullah Khan, M. Iftikhar Hussnain, Muhammad Farooq, Asif Ahmad, Iftikhar Ahmed: *A comprehensive characterisation of safflower oil for its potential applications as a bioactive food ingredient-a review*. **Trends in Food Science and Technology**. 2017; 66, 176-186.  
DOI: 10.1016/j.tifs.2017.06.009. **I.F. 5.191**
  
67. **Nauman Khalid**, Gaofeng Shu, Isao Kobayashi, Mitsutoshi Nakajima, Colin J. Barrow: *Formulation and characterization of monodisperse O/W emulsions encapsulating astaxanthin extracts using microchannel emulsification: Insights of formulation and stability evaluation*. **Colloids and Surfaces B: Biointerfaces**. 2017. 157, 355-365.  
DOI: 10.1016/j.colsurfb.2017.06.003. **I.F. 3.887**
  
66. **Nauman Khalid**, Isao Kobayashi, Marcos A. Neves, Kunihiro Uemura, Mitsutoshi Nakajima, Hiroshi Nabetani: *Encapsulation of cholecalciferol and ergocalciferol in oil-in-water emulsions by different homogenization techniques*. **European Journal of Lipid Science and Technology**. 2017; 119; 1600247.  
DOI:10.1002/ejlt.201600247. **I.F. 1.953 (Journal cover page)**
  
65. Hamzah Shahbaz Bhatti, **Nauman Khalid**, Kunihiro Uemura, Mitsutoshi Nakajima, Isao Kobayashi: *Formulation and characterization of food grade water-in-oil emulsions encapsulating mixture of essential amino acids*. **European Journal of Lipid Science and Technology**. 2017; 119, 1600202.  
DOI:10.1002/ejlt.201600202. **I.F. 1.953**
  
64. Sumaira Khalid, **Nauman Khalid**, Rao Sanaullah Khan, Haroon Ahmed, Asif Ahmad: *A review on chemistry and pharmacology of Ajwa date fruit and pit*. **Trends in Food Science and Technology**. 2017; 63, 60-69.  
DOI: 10.1016/j.tifs.2017.02.009. **I.F. 5.191**
  
63. **Nauman Khalid**, Isao Kobayashi, Marcos A. Neves, Kunihiro Uemura, Mitsutoshi Nakajima,

Hiroshi Nabetani: *Encapsulation of  $\beta$ -sitosterol plus  $\gamma$ -oryzanol in O/W emulsions: Formulation characteristics and stability evaluation with microchannel emulsification*. **Food Bioproduct Processing**. 2017; 102, 222-232.

DOI: 10.1016/j.fbp.2017.01.002. **I.F. 2.687**

62. **Nauman Khalid**, Isao Kobayashi, Mitsutoshi Nakajima: *Recent lab-on-chip developments for novel drug discovery*. **WIREs System Biology and Medicine**. 2017; 9, e1381.

DOI: 10.1002/wsbm.1381. **I.F. 3.027**

61. Sania Arif, Aamina Batool, **Nauman Khalid**, Iftikhar Ahmed, Hussnain Ahmed Janjua: *Comparative analysis of stability and biological activities of violacein and starch capped silver nanoparticles*. **RSC Advances**. 2017; 7, 4468–4478.

DOI:10.1039/c6ra25806a. **I.F. 3.289**

60. Arshia Amin, Iftikhar Ahmed, **Nauman Khalid**, Ghenijan Osman, Inam Ullah Khan, Min Xiao, Wen-Jun Li: *Streptomyces caldifontis sp. nov., isolated from a hot water spring of Tatta Pani, Kotli, Pakistan*. **Antonie van Leeuwenhoek**. 2017; 110: 77-86.

DOI:10.1007/s10482-016-0778-2. **I.F. 1.944**

59. Muneeba Khalid, **Nauman Khalid**, Iftikhar Ahmed, Rumeza Hanif, Muhammad Ismail, Hussnain Ahmed Janjua: *Comparative studies of three novel fresh water microalgae strains for synthesis of silver nanoparticles: Insights of characterization, antibacterial, cytotoxicity and antiviral activities*. **Journal of Applied Phycology**. 2017; 29 (4), 1851–1863. **I.F. 2.372**

58. Safa Souilem, Ines Fki, Isao Kobayashi, **Nauman Khalid**, Marcos A. Neves, Hiroko Isoda, Sami Sayadi, Mitsutoshi Nakajima: *Emerging Technologies for Recovery of Value-Added Components from Olive Leaves and Their Applications in Food/Feed Industries*. **Food and Bioprocess Technology** 2017; 10(2), 229-248.

DOI:10.1007/s11947-016-1834-7. **I.F. 2.574**

## 2016

57. Nazir Ahmad, Iftikhar Ahmed, Muhammad Iqbal, **Nauman Khalid**, Saira Abbas, Farrakh Mehboob, Karam Ahad: *Biodegradation of phenol by Stenotrophomonas sp. and Staphylococcus sp. isolated from contaminated sites*. **Applied Ecology and Environmental Research**. 2016; 14(5):107-120,

DOI:10.15666/aeer/1405\_107120. **I.F. 0.597**

56. Gaofeng Shu, **Nauman Khalid**, Yiguo Zhao, Marcos A. Neves, Isao Kobayashi, Mitsutoshi Nakajima: *Formulation and stability assessment of ergocalciferol loaded oil-in-water nanoemulsions: Insights of emulsifiers effect on stabilization mechanism*. **Food Research International**. 2016; 90: 320–327.

DOI:10.1016/j.foodres.2016.10.021. **I.F. 3.182**

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## Conference Proceedings

47. Yiguo Zhao, **Nauman Khalid**, Marcos Antonio Neves, Isao Kobayashi, Mitsutoshi Nakajima: *Complex coacervation of gelatin and hydrophobically modified kudzu starch*. 19th Annual Meeting of Japan Society of Food Engineering, Tsukuba, Japan; 08/2018 **Oral Presentation**
46. Noamane Taarji, **Nauman Khalid**, Abdellatif Hafidi, Isao Kobayashi, Marcos Antonio Neves, Hiroko Isoda, Mitsutoshi Nakajima: *Formulation of O/W emulsions stabilized by emulsifier from Argan oil press-cake*. 19th Annual Meeting of Japanese Society of Food Engineering, Tsukuba, Japan; 08/2018 **Oral Presentation**
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38. Yiguo Zhao, Nauman Khalid, Marcos A. Neves, Isao Kobayashi, Mitsutoshi Nakajima: *Physicochemical characterization of octyl succinic anhydride modified kudzu starch*. 64<sup>th</sup> Annual Meeting of Japan Society of Food Science and Technology, Nihon University, Shonan Campus, Kanagawa, Japan; 08/2017. **Oral Presentation**

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## Reviewing Responsibilities

1. *Journal of Food and Agricultural Sciences (ACS, USA)*
2. *Lab-on-a-chip (RSC, UK)*
3. *International Journal of Food Properties (T & F, USA)*
4. *Critical Reviews in Food Science and Technology (T & F, USA)*
5. *Langumir (ACS, USA)*
6. *Natural Product Chemistry (ACS, USA)*
7. *Trends in Food Science & Technology (Elsevier Science, UK)*
8. *RSC Advances (RSC, UK)*
9. *International Journal of Biological Macromolecules (Elsevier Science, UK)*
10. *Nutritional Research (Elsevier Science, UK)*
11. *Applied Water Research (SpringerLink, USA)*
12. *Journal of the Food Science and Agriculture (Wiley Science, USA)*
13. *European Journal of Integrative Medicine (Elsevier Science, UK)*
14. *Acta Alimentaria (Akademiai kiado)*
15. *Foods (MPDI, Publishers)*
16. *Food Hydrocolloids (Elsevier Science, UK)*

## Professional certifications

1. OHAS-18001 Operational Health and Safety Management System- Tokyo Japan [Jul 2011-Oct 2011]
2. EMS-14001 Environmental Safety Management System-NPO Pakistan [Jul 2011]
3. ISO 17025 Laboratory Accreditation System Training/Continual Improvement [Mar-Sep 2009]
4. Bio-fuel production - PMAS-Arid Agriculture University [Jun 2010]

5. Halal Food Processing – Bureau verities Pakistan [Apr 2010]
6. Project Management-NPO Pakistan [Apr 2010]
7. ISO 22000 Food Safety and Quality Management System Auditing- NPO Pakistan [July 2010]
8. ISO 9001:2008 Quality Management System Development and Implementation [May 2008]

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