



جامعة نِزْوَى
University of Nizwa

Deanship of Research



Annual Research Report 2020-2021





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Annual Research Report 2020-2021

“On top of our national priority is the education sector, with all its types and levels.

It will receive full attention, and it will be provided with the supporting environment which motivates research and innovation”.

His Majesty
Sultan Haitham bin Tarik Al Said



His Majesty
Sultan Haitham bin Tarik Al Said

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Professor

Dr. Ahmed Al-Harrasi

Vice Chancellor for
Graduate Studies, Research
and External Relations

University of Nizwa

FOREWORD

It gives me great pleasure to present to you the Annual Research Report of the University of Nizwa (UoN) for the academic year 2020-21. Despite all challenges we were faced with as a result of the pandemic and the substantial decrease in funding, the University has maintained outstanding research outcomes in terms of volume, quality and impact. This has remarkably improved the university academic ranking.

Based on the scimagoir.com (world research ranking), the UoN was ranked 409 in 2021 and ranked the first in Oman by the nature index. Furthermore, in QS 2021 Arab world ranking, UoN has been ranked the second in Oman and 81-90 in the Arab world. Eleven of our faculty members have been named by Stanford University's global list of top 2% Scientists in year 2020-2021. Research at UoN aims at creating an innovative research culture where capacities are developed, collaboration and networking among researchers are fostered, and where research outcomes are geared toward social economic growth. It has therefore quantified the three major research components: research infrastructure, funding and human resources to produce effective research development.

I thank everyone who made our research story a great success in spite of all challenges.

Ahmed Al Harrasi

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Abbreviation

UoN	University of Nizwa
CAS-A/S	College of Arts and Sciences –Arts/Sciences
CEA	College of Engineering and Architecture
CEMIS	Collage of Economy management and information system
CPN-P/N	College of Pharmacy and Nursing- Pharmacy/Nursing
FURAP	Faculty mentors undergraduates research award program
GRG	Graduates Research Grants
NCMSM	National Chair of Materials Science and Metallurgy
NMSRC	Natural and Medical Sciences Research Centre
ORG	Open Research Grants
TRC	The Research Council
URG	Undergraduates Research Grants
UCASA	UNESCO Chair on Aflaj Studies – Archaeohydrology



Measuring the flow rate of the
Falaj Al-Khatmain, Birkat Al-Mouz

1. UoN Rankings

The University of Nizwa ranked number 1 in the nature index for the period of 1 August 2020 - 31 July 2021: The nature index has released the information about top 10 institutions in the Sultanate of Oman based on Fractional count (FC) that takes into account the percentage of authors from that institution and the number of affiliated institutions per article.



Figure 1.1: Source: Scimago Institutions Ranking - <https://www.scimagoir.com/institution.php?idp=11518>

Table 1: Source: nature index - <https://www.natureindex.com/country-outputs/Oman>

Institution		Count	Share
1.	University of Nizwa	4	2.20
2.	Sultan Qaboos University (SQU)	5	2.09
3.	German University of Technology (GUtech)	2	0.27
4.	Petroleum Development Oman (PDO)	1	0.20
5.	Burjeel Hospital	1	0.11
6.	A'Sharqiyah University (ASU)	1	0.10
7.	University of Technology and Applied Sciences-Nizwa (UTAS-Nizwa)	1	0.05



Figure 1.2: Source: QS Arab Region Ranking - <https://www.topuniversities.com/universities/university-nizwa>

2. Stanford University names world's top 2% scientists, 2021

Stanford University has recently released an update of the list that represents the top 2% of the *most-cited scientists* in various disciplines. The database provides standardized information on citations, h-index, co-authorship-adjusted hm-index, over 100,000 top-scientists that provides standardized information

on citations, h-index, co-authorship adjusted hm-index, citations to papers in different authorship positions and a composite indicator.

Nine Scientist from the University of Nizwa have been listed on the World's Top 2% Scientists, as Shown in Table 2 below.

Source: ECEBM - <https://ecebm.com/2021/10/26/stanford-university-names-worlds-top-2-scientists-2021/#:~:text=The%20report%20was%20prepared%20by,top%20%25%20of%20Scientists%20List>

Table 2: UoN- List of the top 2% of the most-cited scientists in various disciplines

Researcher's Name	Number of Publications	World Rank	Subject	Field	Branch
Khan, Abdul Latif	188	79111	Biology	Plant Biology & Botany	Biotechnology
El-Karamany, Ahmed	76	98255	Engineering	Mechanical Engineering & Transports	General Physics
Maurya, S. K.	68	106503	Physics & Astronomy	Nuclear & Particle Physics	Astronomy & Astrophysics
Yadav, Dhananjay	46	117236	Engineering	Mechanical Engineering & Transports	Applied Mathematics
Hussain, Hidayat	240	148508	Chemistry	Medicinal & Biomolecular Chemistry	Plant Biology & Botany
Hossain, Mohammed Amzad	77	167795	Clinical Medicine	Tropical Medicine	Plant Biology & Botany
Bhatia, Saurabh	33	201269	Chemistry	Medicinal & Biomolecular Chemistry	Polymers
Al-Harrasi, Ahmed	234	212383	Chemistry	Medicinal & Biomolecular Chemistry	Plant Biology & Botany
Hussain, Javid	189	299818	Chemistry	Medicinal & Biomolecular Chemistry	Plant Biology & Botany

Distinguished Researchers from University of Nizwa



Professor Ahmed Al-Harrasi received his BSc in Chemistry from Sultan Qaboos University (Oman) in 1997. He then moved to the Free University of Berlin from which he obtained his MSc in Chemistry in 2002 and then his PhD in Organic Chemistry in 2005 as a DAAD-fellow under the supervision of Prof. Hans-Ulrich Reissig. His PhD work was on New Transformations of Enantiopure 1,2-oxazines. Then he received the Fulbright award in 2008 for postdoctoral research in chemistry for which he joined Prof. Tadhg Begely group at Cornell University where he worked on synthesis of isotopically-labeled thiamin pyrophosphate. After a postdoctoral research stay at Cornell University in 2009, he started his independent research at the University of Nizwa, Oman where he founded the Chair of Oman's Medicinal Plants and Marine Natural Products merging chemistry and biology research that evolved into the Center of Excellence in Natural and Medical Sciences. He is currently a professor of organic chemistry and the Vice Chancellor for graduate Studies, Research and External Relations at the University of Nizwa. The budget of his interdisciplinary-funded projects exceeds 10 million USD. He was a chair and invited speaker in many international conferences. He is a referee for more than 15 international chemistry and biotechnology Journals. He has authored and co-authored over 400 scientific papers, five books and 15 book chapters. He taught chemistry courses both at undergraduate and postgraduate levels. He is named in Stanford University's global list of top 2% Scientists in year 2019-2020.



Dr. Sunil Kumar Maurya received his Ph.D degree in Mathematics from IIT Roorkee, India in 2013. He is currently serving as the Assistant Dean for Graduate Studies and Scientific research in the College of Arts and Sciences. His research area includes General Relativity, Astronomy and Astrophysics, Cosmology, Modeling of Compact Stars, Modified Gravity Theory, and Wormholes. Currently, he is working on the Modeling of compact stars in Einstein's GR and modified gravity theory, together with Traversable Wormholes problems. Dr. Sunil has published around 96 research papers in high reputed SCI/SCIE journals (total IF 329.12). In addition, he has published 4 papers in Nature Indexed journals, during the period 1st August 2020 to 31st July 2021.



Dr. Anil Philip and his team at school of Pharmacy Faculty were granted US Patent-11,013,748 Budesonide Nano Prodrug. The patent received is a solution for the treatment of the inflammatory bowel disease health condition. We (University of Nizwa) have created a patented capsular system containing a drug in an inactive form (prodrug) which is targeted to the colon. The drug becomes active once it reaches the colon due to certain conditions/activities. The capsular system is non-disintegrating and neither the pH of the gastrointestinal system nor the presence of any other matter will affect the capsule. The drug is released once a day from the pores formed on the capsular system in the body fluids.



Achievements at University of Nizwa

A Glimpse



+1930
Publications

+320
Publications
each year

+107
Conference
Paper/year

+204
Conference
Participation/
year

+1237
Conference
Participations

+143
Books &
Book chapter

45
Funded
Projects by
MOHERI

+100
UoN
Funded Projects

+12
OB
Funded Projects

82
URG/FURAB
Funded Projects

+80
Awards

1st
University in the
nature index

1st
Private
University in
SCIMAGO

3
Patents

68 Mil.
OMR
Total Internal
Research Ex-
penditure

+70
National
& International Research Collaborations

2%
Top 2%
Nine Scientist have
been listed on the
World's Top 2% Scien-
tists

+82
Faculty members
Registered as pro-
fessional scholars

Grants at University of Nizwa

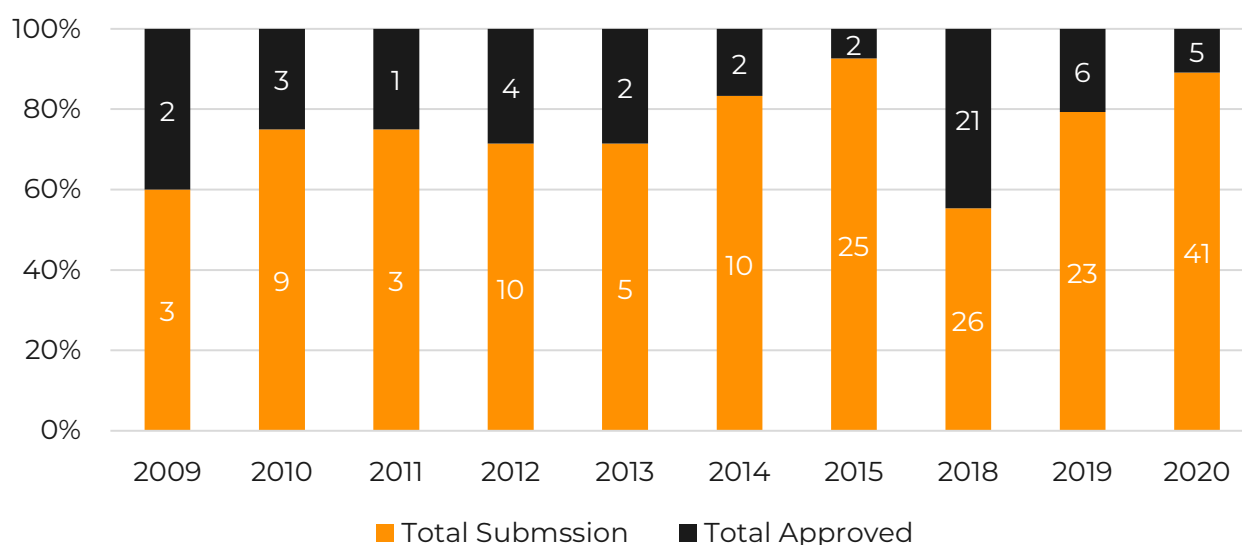
Table 3: Total Research Grants in 2020/2021

3. Faculty/Researcher Grants

	External	Internal
Number of Research Grants	17	6
Total Fund	77571	115000

4. Research Grants - 2020 –Ministry of Higher Education, Research and Innovation

Total TRC- submitted /approved research proposal/year Under ORG/RG



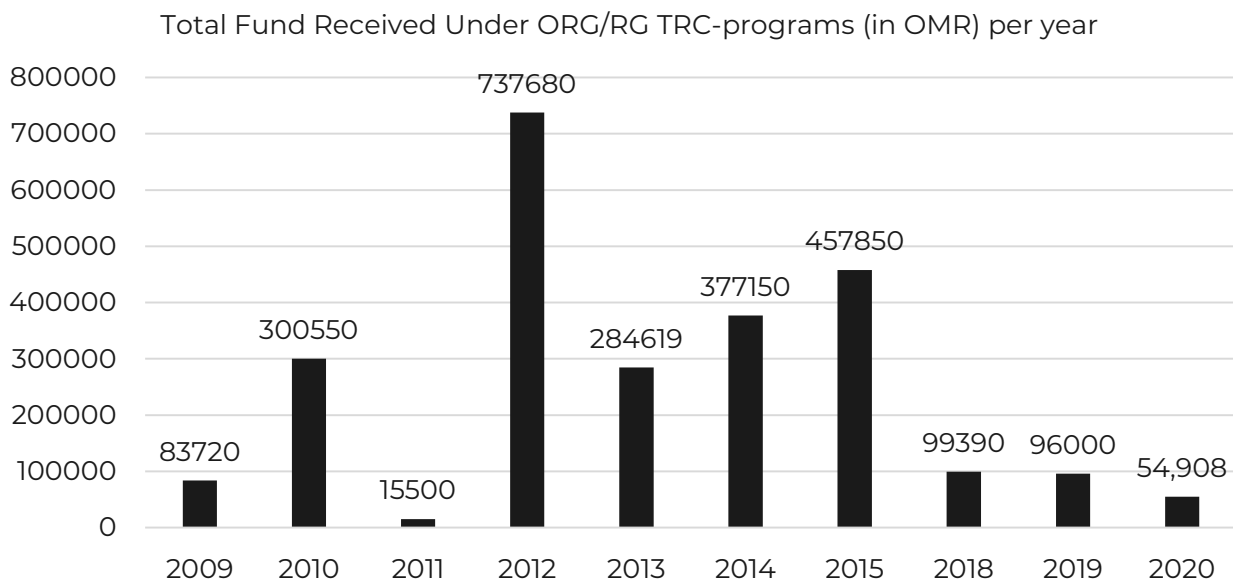
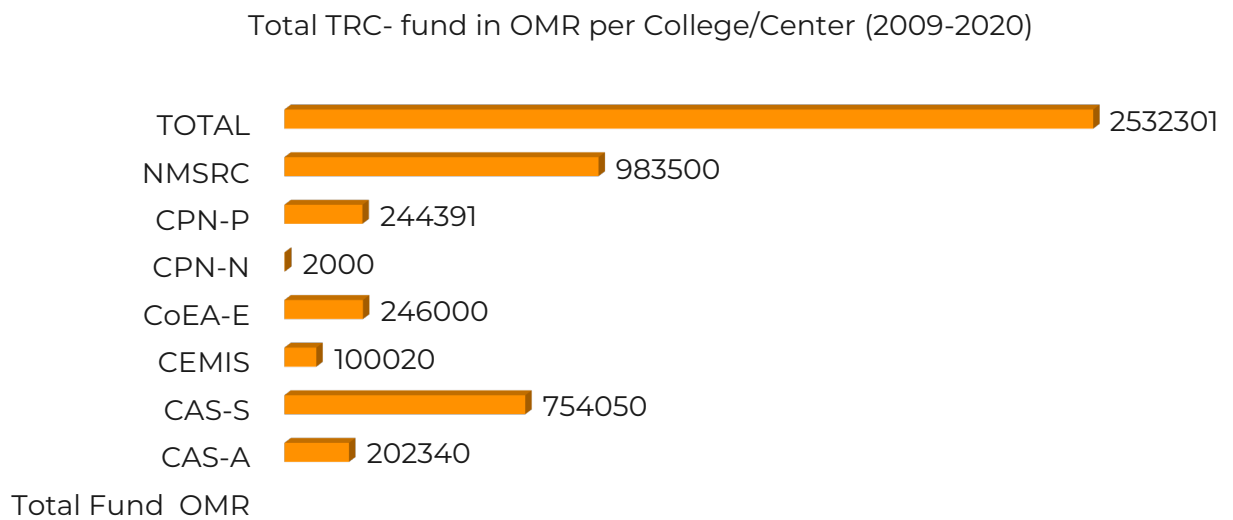


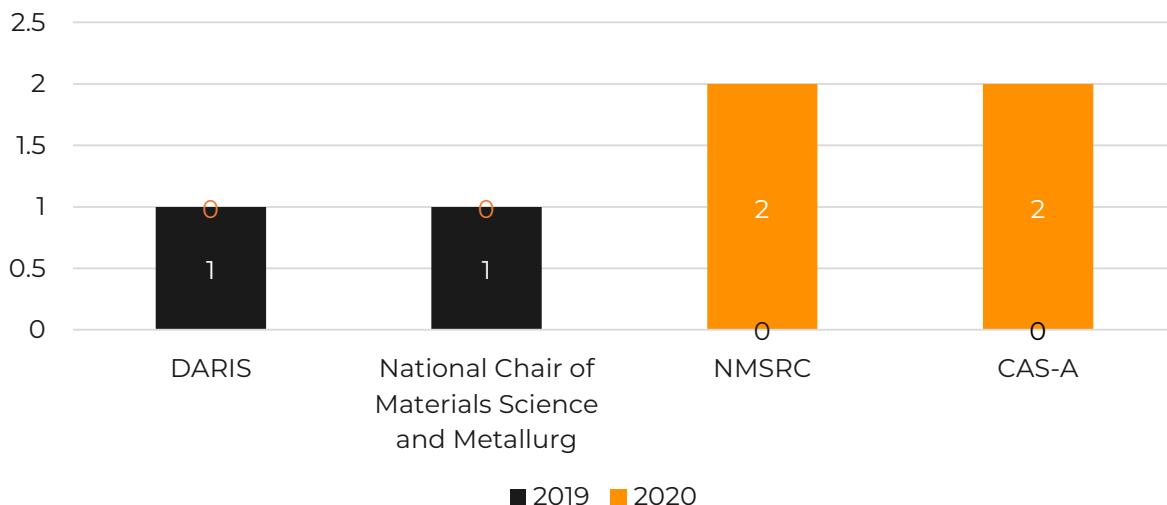
Figure 4:: (a, b, c): Research Grants - 2020 –Ministry of Higher Education, Research and Innovation

5. Graduate Research Grants

Graduate Research Grants (GRG) targets young researchers that are non-PhD holders such as postgraduate students or employees. The Maximum fund under this category is 3000 OMR. University of Nizwa encourages

young researchers to apply for research grants under this program. 6 approved Grants were obtained in Under GRG in the 2019 and 2020. The total fund of GRG is 8390 whereas 6000 in 2019.

Total Approved Research Proposal under GRG TRC-Programs per College/Center



6. Student Grants

Table 6.1: Distribution of FURAP Projects/ URG by College and Research Chairs

Academic year	CAS	CEMIS	CEA	CPN	Chairs	Total
2020/2021	4	1	1	1	0	7

Table 6.2: Bachelor Graduation Projects (2016-2021)

Academic year	CAS	CEMIS	CEA	CPN	Total
2016-2017	190	98	51	126	465
2017-2018	203	26	63	78	370
2018-2019	243	46	63	76	428
2019-2020	215	58	36	88	397
2020/2021	298	58	27	88	471

Table 6.3: Under Graduate Projects (formally FURAP) Projects Fund

	2020/2021	Total
Number of Research Grants	7	82
Total Fund in OMR	9740	166986

Table 6.4: Student Publications in international Journals 2020-2021

Year/ College	CAS	CEA	CPN	CEMIS	UoN
Under-graduate	6	8	7	4	25
Graduate	15	0	0	7	22

*The total Received Fund under TRC Undergraduates Research Grants (URG) formerly called Faculty-Mentor Undergraduates Research Awards program (FURAP) = 166986 OMR.

Research outcomes are presented below in terms of the number of journal papers, journal papers per faculty, the number of papers presented in international and national conferences, the number of books/book chapters, and the quality of journals.

A total of (319) papers were published in journals in 2020/2021 compared to (297) papers published in 2019-2020. Figure 6.1 shows the distribution of journal papers between colleges.

Table 7.1.1: Distribution of Journal Papers per College per year (2016/2017 – 2020/2021)Table 7.1.2: Journal Papers to Faculty Ratio by College per year (2016/2017 – 2020/2021)Page 13

Table 7.1.3: Distribution of Journal Papers by Research Center and Unit per year (2016/2017 – 2020/2021)

Year/Research Center	NMSRC	DARIS	Al Khalil	UCASA	National Chair
2016/2017	96	5	1	0	11
2017/2018	110	7	3	1	28
2018/2019	108	5	3	1	18
2019/2020	88	3	0	0	7
2020/2021	108	0	0	0	9

Table 7.1.4: Journal Papers to Faculty Ratio by Centers per year (2016/2017 – 2020/2021)

Year/Research Center	NMSRC	DARIS	Al Khalil	UCASA	National Chair
2016/2017	8	1.25	0.2	0	2.75
2017/2018	4.5	1.6	1.5	0.25	4.5
2018/2019	2.7	3	1.5	0	7
2019/2020	1.96	1	0	0	2.7
2020/2021	2.7	0	0	0	4.5

7.2 Books/Book Chapters

Table 7.2: Number of books published per research centers (2016/17 – 2020/2021)

Year/Research Center	NMSRC	DARIS	Al Khalil	UCASA	National Chair
2016/2017	4	0	6	0	0
2017/2018	1	0	2	0	0
2018/2019	5	2	5	1	0
2019/2020	7	0	6	0	0
2020/2021	8	0	0	1	0

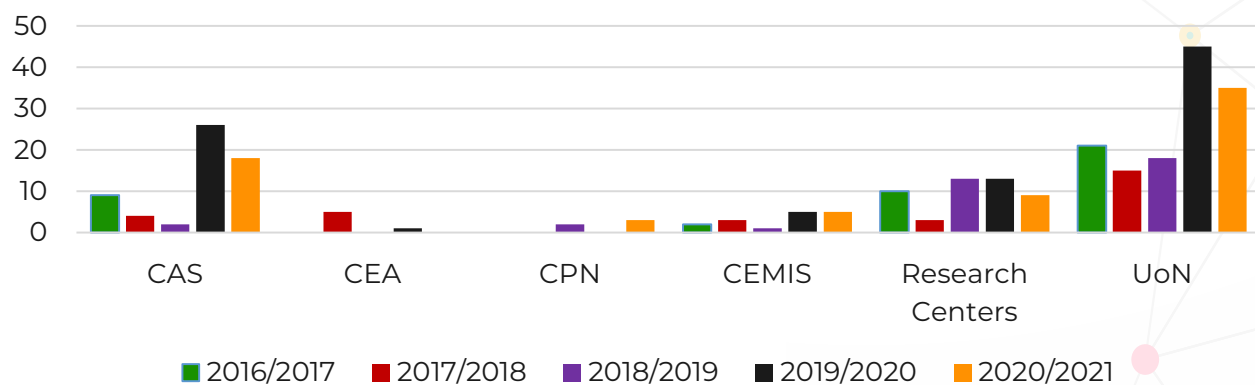


Figure 7.2: Number of books published per college in (2016/2017 – 2020/2021)

7.3 Awards

US Patent

Award Title	Awarded by	Faculties & Student	College/ Research Center
US Patent	US Patent and Trademark Office	- Anil Philip - Betty Samuel - Afaf Mohammed - Ahmed Al Harrasi - Ahmed Al Rawahi - Hamna Al Senani^(Student)	The College of Pharmacy & Nursing (CPN)



e-Poster

Award Title	Awarded by	Faculty & Student	College/ Research Center
Best Undergraduate Student e-Poster in Clinical Pharmacy Specialty	RAKCOPS-ICDD 2021 International e-Conference on Drug Development 2021	- Dr. Sabin Thomas - Suleiman Masood Said Al-Humaimi^(Student)	The College of Pharmacy & Nursing (CPN)



Faculty Award

Award Title	Awarded by	Faculty	College/ Research Center
Best Faculty Award (International Scientist Awards on Engineering, Science and Medicine, Feb 2021)	VDGOOD Professional Association, India	Mr. Mohamed Yousuf S.	The College of Engineering & Architecture (CEA)



Appreciation

Award Title	Awarded by	Faculty	College/ Research Center
Certificate of Appreciation	1st International Conference on Engineering and Technology, 2021 Universiti Malaysia Perlis (UniMAP) and Hadhramout	• Dr Hussein Al Abdulqader	The College of Engineering & Architecture (CEA)



Presenter Award

Award Title	Awarded by	Faculty	College/ Research Center
Best Presenter Award in Architectural Engineering in "1st international conference on Smart Innovation in Science and Engineering"	Dhofar University	• Mrs. Sofia Sebastian	The College of Engineering & Architecture (CEA)



Literati Awards

Award Title	Awarded by	Faculty	College/ Research Center
Highly Commended Paper in the 2020 Emerald Literati Awards	Emerald Publishing/ ISI/SCOPUS Journal	• Dr. Wael A. Khudhayer	The College of Engineering & Architecture (CEA)



Compilation

Award Title	Awarded by	Faculty	College/ Research Center
Certificate of compilation all the requirements of Managing Project Risks	Project management consulting and training PMCTQuest Inc.	• Dr. Mamdouh I. Zaky Galil	The College of Engineering & Architecture (CEA)



Two Best Projects

Award Title	Awarded by	Faculty	College/ Research Center
Two Best Projects on the 10th symposium for Engineering graduated Project, University of Nizwa 15-12-2020	University of Nizwa	• Dr. Luai Al Jubori	The College of Engineering & Architecture (CEA)
1. Gates to the skies 2. Electronic game arena			



Two Best Projects

Award Title	Awarded by	Faculty	College/ Research Center
Two Best Projects on the 10th symposium for Engineering graduated Project, University of Nizwa 15-12-2020:	University of Nizwa	• Dr. Luai Al Jubori	The College of Engineering & Architecture (CEA)
1. New Kasab Terminal design 2. Public library interior design			



Certificate of Merit

Award Title	Awarded by	Faculty	College/ Research Center
The students, Muzna Hassan Alajmi & Khaloud Abdullah Almaqbali won the event prize (OMR- 150) for Technical Paper Presentation at NUTechFest 2021	National University of Science and Technology, Sultanate of Oman NUTechfest 2021 A Smart and Sustainable Sultanate	• Wameath	The College of Engineering & Architecture (CEA)



Best Paper

Award Title	Awarded by	Faculty	College/ Research Center
Best Paper Award	10 th National Symposium on Engineering Final Year Projects. Dec 2020	• Salam Al-Dawery	The College of Engineering & Architecture (CEA)



Certificate of Merit

Award Title	Awarded by	Faculty	College/ Research Center
3 rd place research paper submitted to Young Oman water Research Award.	MEDRC Water Research March 2021	• Salam Al-Dawery	The College of Engineering & Architecture (CEA)



Certificate of Merit

Award Title	Awarded by	Faculty	College/ Research Center
Certificate of Merit Ms. Wasal Hamed Said Al Khanbashi has secured the 1 st Place in the Poster contest of NUTechFest 2021,	National University of Science and Technology, Sultanate of Oman NUTechfest 2021 A Smart and Sustainable Sultanate	• Sri	The College of Engineering & Architecture (CEA)



*Awards Achieved in 2020/2021

7.4 Conference Papers and Attendance

In 2020/2021, 197 college faculties and 7 research center/chair/unit members attended

national and international conferences. A total of 107 papers were presented by University faculty in national and international conferences.

Table 7.4.1: Conference papers by College/Research Centers at National & International Level (2020/2021)

	College	CAS	CEA	CPN	CEMIS	Research Centers	UoN
2020-2021	International	31	9	0	30	6	76
	National	4	23	1	1	2	31

Table 7.4.2: Conference papers by College/Research Centers (2016-2021)

Year/college	CAS	CEA	CPN	CEMIS	Research Centers	UoN
2016/2017	12	23	0	2	26	63
2017/2018	14	41	17	6	45	123
2018/2019	18	37	7	17	25	104
2019/2020	30	11	32	19	11	103
2020/2021	35	32	1	31	8	107

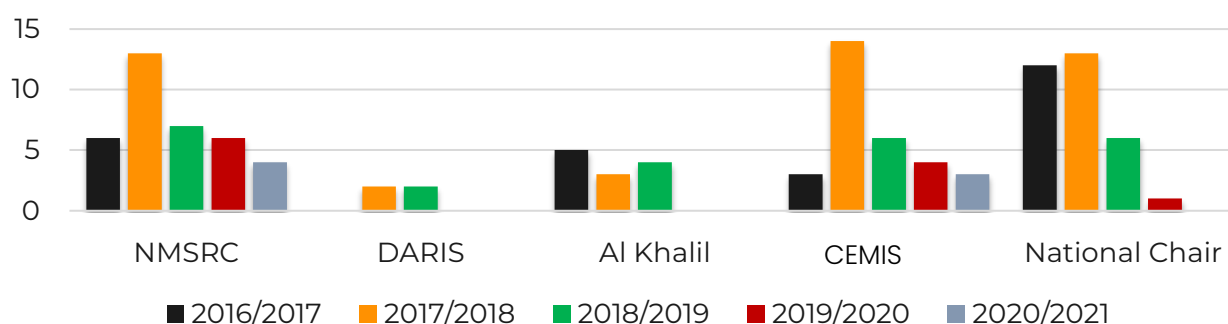


Figure 7.4.1: Conference papers by Research Centers (2016-2021)

7.5 Seminars and Workshops

All colleges at the UoN conducted seminars and workshops. The total number of seminars

and workshops during this academic year was 192.

Table 7.5: Seminars and workshops by College/ Research Centres (2016/2021)

Year/college	CAS		CEA		CPN		CEMIS		Research Centers		UoN	
	Sem-inars	Work-shops	Sem-inars	Work-shops	Sem-inars	Work-shops	Sem-inars	Work-shops	Sem-inars	Work-shops	Sem-inars	Work-shops
2016/17	6	2	13	1	7	2	7	2	17	12	50	19
2017/18	3	1	24	2	5	14	12	6	32	22	76	45
2018/19	10	0	10	9	7	8	9	8	35	9	62	31
2019/20	10	26	26	34	32	40	8	9	13	18	89	127
2020/21	44	48	18	11	18	10	22	7	7	7	109	83



Researchers at NMSRC, University of Nizwa

In Pursuance of **Research** Excellence

8. Highlights of Research Centers Achievements

8.1 Establishment of The UNESCO Chair on Aflaj Studies (Archaeohydrology)

The UNESCO Chair on Aflaj studies, is the first of its kind in the world. The University of Nizwa announced the creation of this Chair on May 2021. The purpose of this Chair is to promote an integrated approach of research, education, and training in the field of aflaj systems and related studies. The research component will focus on aflaj systems and its interaction with human and biosphere. The teaching component will develop degree programs on Archaeohydrology, sociohydrology or related studies. The Chair is committed to promoting research pertaining aflaj and provide support to scholars and public for research, service, and educational activities. We are seeking to see the chair an internationally leading academic research center dedicated to advancing and applying high standards of research practices in aflaj systems.

8.2 US Patent- 11,013,748: Budesonide Nano Prodrug:

The patent is an original work with an in-house asymmetric capsular system containing nano-sized budesonide prodrugs. The uniqueness of this targeted drug delivery system is that it releases the drug in a controlled way only when the delivery system reaches the colon. The dosage form controls the drug release due to the asymmetrical nature of the membrane and eliminates the need for a laser-drilled (orifice) dosage form for the drug release. The controlled drug release is due to the osmotic pressure created by the salts inside the dosage form. This drug delivery can help in the treatment of inflammatory bowel diseases, including ulcerative colitis, and Crohn's disease. There have been 20 unique claims which are part of this patent.

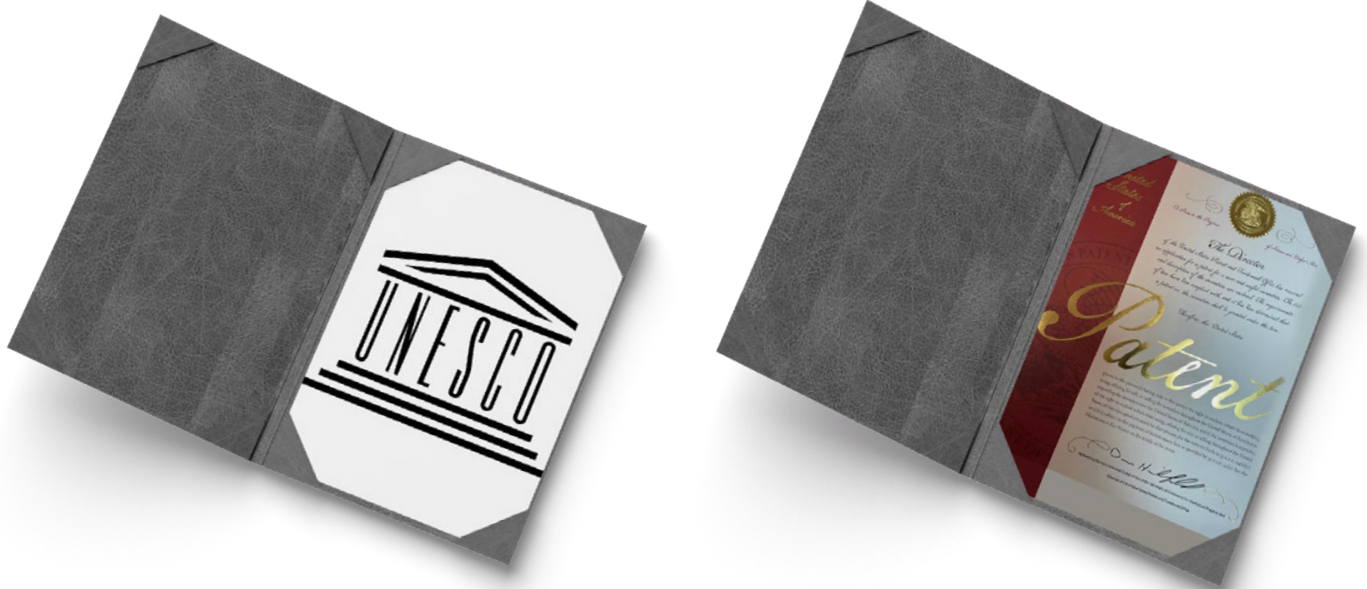




Table 9.01: UoN International Research Collaboration in 2020/2021

No.	Research Chair/Center	No. of International Collaborators	No. of International HEIs of affiliation	Sample of Research Areas Being Investigated
1	College of Pharmacy & Nursing	4	4	- Field of Infectious disease, - Health care
2	College of Arts & Sciences	66	37	- Educational Fields - Mathematics and - Natural Sciences, Chemistry Languages
3	College of Engineering	2	1	- Generative Urban Design Concepts and - Methods: A Research Review.
4	Natural and Medical Sciences Research Center (NMSRC)	28	22	- Lymph tissue engineering - Drug delivery using microvesicles - Tissue engineering - Microfluidic - Fungal strains - Cystic fibrosis - Long QT syndrome - Isolation of bioactive ingredients from Medicinal Plants - PCMD - Chemistry
5	National Chair of Materials Science and Metallurgy	2	2	Materials Science

Table 9.02: UoN researchers are acting as co-supervisors to 13 Ph.D. students from international universities.

Supervisor Name	No of Students	Country	Area of the Study
Dr. Ajmal Khan	2	• Pakistan	• Enzyme inhibition and medicinal chemistry
Dr. Majid Khamis Al Salmani	2	• Iran • Pakistan	• Human molecular physiology
Abdullah M. S. Al-Hatmi	3	• China • Netherlands	• Clinical, Medical, Molecular Mycology
Sulaiman Al-Hashmi	1	• Iran	• Tissue engineering and regenerative medicine
Dr.Salem Said Al Touby	1	• Sweden	• Human resources management and job satisfaction among medical laboratory Technologists
Dr.Sabin Thomas	1	• Malaysia	• Social Pharmacy
Mohammad Dulal Miah	1	• Thailand	• Case Studies of Banking Industry Regulatory Reform, Transformation and Mergers in a Developing Market
Total 13			

9.1 Al khalil University of Nizwa Journal for Literary and Linguistic Studies

The University issued 10 volumes of this international journal in 2020/2021.

9.2 Scholars Professional Involvements

Around 82 faculty members were registered as professional scholars in many international journals as reviewers and/or in editorial boards of journals (covering more than 68 recognized journals).



10. The Research Council (TRC) Funded Projects

Title of the project	Carbon Dioxide and Isocyanate Organocatalysis: A Sustainable Approach in Turning Greenhouse Gas and Toxic Compounds into Chemical Feed stock/ RG
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Principal Investigator	Dr. Ali Rostami
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Center /College	Natural and Medical Sciences Research Center (NMSRC)
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An overview of the research project: In this project, the synthesis of small organic molecules that utilizes both acidic and nucleophilic motifs cooperatively and further exploration of these molecules in the reactions of CO₂ and isocyanates were carried out. The organocatalysts that were developed here are attractive, potent alternatives to metal-based platforms that trigger epoxide activation, halide nucleophilic ring-opening process, CO₂ and isocyanate inclusions in a synergistic fashion. These catalysts were utilized for the atom-economical conversions of a plethora of epoxides to cyclic carbonates and 2-oxazolidinones under environmentally benign conditions. A rational survey of the efficiency of different organocatalysts and the influence of different parameters, such as temperature, catalyst loading, and the nature of the nucleophile, on catalytic activity were conducted. In addition, the time-dependent conversions of epoxide into the corresponding cyclic carbonate and 2-oxazolidinones were further explored by FTIR-ATR and ¹H NMR spectroscopy. Finally, in light of titration experiments, chiral HPLC separations, and DFT calculations the mechanisms of these reactions were further explored.

Title of the project	Anti-diabetics Potential of Boswellic acids and Improvement of their Efficacy by Nanoparticle Formulation and Glycosylation: A Novel Approach for Diabetics/ RG
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Principal Investigator	Dr. Ajmal Khan
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Center /College	Natural and Medical Sciences Research Center (NMSRC)
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An overview of the research project: Diabetes mellitus is a serious health problem which is characterized by an abnormal postprandial increase of blood glucose level. The control of postprandial hyperglycemia is believed to be important in the treatment of diabetes mellitus. A potential therapeutic approach for dealing with the problem could be through inhibition of the major digestive enzymes, responsible for the breakdown of carbohydrates. α -Amylases and α -glucosidases are the two important digestive enzymes in intestine that is responsible for the postprandial hyperglycemia. Inhibitors of α -amylase and α -glucosidase delay the breaking down of carbohydrates in the small intestine and diminish the postprandial blood glucose excursion. Therefore, the search for more effective compounds with less side effects continues, and appeared to have gained increasing interest in last few years. *Boswellic* acid active terpenes isolated from different species of genus *Boswellia* possess superior anti-inflammatory activity and proved potent against several cancer cell lines. However, its exceptional potency is limited by its low water-solubility and hence bioavailability.

We have reported *boswellic* acid derivatives as active inhibitors of β -glucosidase. Considering the antidiabetic potential of *boswellic* acids, two main *boswellic* acids (β -BA and β -KBA) were isolated from *Boswellia sacra* in the current study and scrutinized in in vivo model of high fat diet and low dose STZ-induced T2D with detailed parameters. β -BA and β -KBA decreased the blood glucose level significantly in fasting STZ-induced diabetic rats and caused a significant reduction in the lipid and lowered various biochemical parameters including SGPT, SGOT, ALP and serum creatinine in diabetic rats. The lowering of blood glucose level and effects on the pancreatic β -cells of islets of Langerhans indicate a strong antidiabetic potential of β -BA and β -KBA.

Title of the project	The Intelligent Survival System/ URG
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Team leader	Suha Alfulaiti
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Faculty Mentor	Dr Abdullah Al-Hasant
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College	The College of Engineering & Architecture
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An overview of the research project: Oman is highly susceptible to many natural disasters such as Flooding, Tornados and hurricanes. According to Oman civil defense, a significant loss in people in addition to substantial damage of the country infrastructure has been reported because of such disasters. In the event of an emergency, a clear signage called “Assembly Point” should be available in well designated and safe locations in order to assist in the evacuation and rescuing process. However, in this case two main challenges will be faced. Firstly, people may have difficulty to reach such assembly points. Secondly, there is no information about the presence or absence of people at these assembly points, which makes the rescuing process more complicated.

This project aims at designing an Intelligent Survival System (ISS). The proposed system consists of two components: intelligent assembly points (i-AP) and mobile application (i-survival). The task of the intelligent assembly points is to collect information about the status of the assembly locations. Then, send this information to the system users as well as to the local authorities of civil defense. On the other hand, the task of the i-survival as a mobile application (Apps) is to make an earlier warning to its user about any approaching disaster, to make sure that people can reach the closest and the safest assembly point and allow them to request assistance within a proper time frame.

Title of the project	Investigating Padlet self-reflective e-portfolio in raising novice EFL teachers' awareness of learner centeredness/ GRG
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Principal Investigator	Siham Al Amri
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Supervisor	Dr. Cecile Gabarre
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College	The College of Arts and Sciences
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An overview of the research project: Who would not look forward to content learners and less stressed teachers? That is what the learner-centered approach is meant to do. However, research reveals that there is a significant number of Omani EFL novice teachers who are adopting teacher-centered rather than learner-centered activities in their classes. This situation might be due to the teachers' perceptions of the theoretical aspects of the approach and to a lack of practice-oriented training in their teacher professional development. The proposed research stems from recent findings highlighting the benefits of introducing teacher self-reflection on their practices when seeking to enhance awareness on their teaching approach. Therefore, this action research seeks to raise novice EFL teachers' awareness of learner centeredness with the implementation of self-reflexive e-portfolios. This research aims to investigate how teachers use Padlet e-portfolio for self-reflection.

A systematic grounded theory will be conducted with six novice EFL teachers from public schools. The data collection will be conducted through semi-structured interviews, artifact analysis and monitoring of Padlet e-portfolio activities. The outcomes of the research are expected to induce novice teacher's systematic learner-centeredness implementation in their classrooms. The research will generate a self-reflective e-portfolio model for teachers and institutions in Oman.





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Credits

Editorial:

Prof. Dr. Ahmed Al-Harrasi
Dr Ahmed Khalifa Al-Shukaili

Report Prepared by:

Ms. Shamsa Mohammed Al-Rawahi

Designing & Typesetting:

Syed Mohammad Sarfaraz Hamid

Deanship of Research

email: uondr@unizwa.edu.om
University of Nizwa.

