

**Distribution of graduation research projects for the fourth stage - morning for the academic year 2019-2020**

Student names	Research project name	Supervisor name	ت
Amina Mustafa Omar Saja Abbas Hamdi	The use of transparent metal oxides as gas sensors	Prof.Dr.. Hamed Saleh Abtan	.1
Esraa Youssef Abdullah	Study of hybrid junction properties of metal oxides for solar cell applications		
Jihan Fawaz Ali Fayyad Nada Jamal Hussein Ali	The use of nano-coatings for some types of alloys	Prof.Dr Said Nayef Turki	.2
Ahmed Kazem Jassim Mohammed Younis Mukhlif Abdullah Ahmad	Modern Nano Technologies	Dr. Saadi Khalaf Faihan	.3
Esraa Jamil Sweden	Solar cells, their manufacture and practical applications		
Asala Ahmed Abdullah Hassan Ahmed Emad Mahdi Ibrahim	Calculation of the energy levels and the transition energy of some vibrational nuclei	Dr.. Ali Khalaf Obaid	.4
Rand Nasreddin Ayoub Haneen Majid Abdel Hamid	Optical fiber and its future prospects	Dr.salam Moses	.5
Qutouf Shehab Shukr Talli	Communication system using laser beams		
Sabrina Hindi Kariman Russell Emad Farhan	Studying the electrical properties of carbon nanotubes	Dr. Alaa Ahmed Dayeh	.6
Hamza Faeq Bata Farhan	Thermal transfer and some applications		
Said Hamid Hussein Sobh	Bose-Einstein statistics and its applications	Ibrahim Jassim	.7

<b>Ahmed Muzaffar Nouri Kardosh</b>	<b>Maxwell Boltzmann statistics and its applications</b>		
<b>Diaa Jabbar Hamid Hazm</b>	<b>Fermi Dirac statistics and its applications</b>		
<b>Ansam Mohammed Dhahi Farhan Shaima Ahmed Hadi Saleh</b>	<b>The study of spectra using X-rays and their applications in studying the atomic structures of materials</b>	<b>Dr. Najm Abdullah Khalifa</b>	<b>.8</b>
<b>Mahmoud Kamal Abdel Alwan</b>	<b>Study of magnetic properties of some alloys consisting of some alkaline elements with outer orbit 5d, 4f</b>		
<b>Sufian Abdel Razzaq Salameh</b>	<b>Study of the physical properties of the solar system</b>	<b>Fareed Musab Mahdi</b>	<b>.9</b>
<b>Hajar Mahmoud Waheed Bardi</b>	<b>Study of the physical properties of the planet Pluto</b>		







Youssef Aqoub Hussein	Design and build aids to understand and assimilate the physics curriculum for the second intermediate grade	Dr.. Raed Khader Suleiman	.10
Lara Amash Awad Farhan	Hydrogen extraction from water using solar energy		
Mustafa Nagy Abed I Muhammad Uday	Study of the properties of thin films of transparent conductive oxides and their applications	Dr. Mustafa Zain	.11
Fatima Ammar Ali Shahd Kamel Khalil	Thin films, types and applications	Dr. Jassim Muhammad	.12
Marwa Thabet Abdullah	Nanotechnology in medicine		
Hamid Selim Elaf Rafea is back	Use of walnut shell residues to fortify PMMA	Dr. Walid Badawi Saleh	.13
Iman Khaled Ibrahim	Use of eggshell residues to fortify PMMA		
Anwar absent Hammad Heba Mohamed Katch	Study of the factors affecting the properties of polymeric composites	Dr. Ahmed Hammad Monajed	.14
sirohn fawaz	Superconducting materials and their applications		
Ali Hamid Muhaimid Ibrahim Ahmed's shield	Studying the difference between a neutron and a proton through mirror nuclei	Dr. Walid Sahbehi Howeish	.15
Zhoor mahmoud shehab	Studying the nucleus bonding energy using different formulas		
Sheba Amin Abdulaziz	Study of some physical properties of tin dioxide with aluminum nanostructures	Dr.. Jamal Fadel Muhammad	.16
Amir Dhafer Nouri Hala Jamal Nayef	Studying the optical properties of SnO <sub>2</sub> /TiO <sub>2</sub> using two different techniques		
Amal Latif Jassim Alaa Haqqi Ismail	Atomic force microscope	Dr. Omar Mehdi Daoud	.17
Saleh Hassan Mohammed	transmission electron microscope		
Yasser Basil Wasmi Jacob Ahmed	Global warming and its effects on the environment / harms, benefits and methods of treatment	Omar Abdulaziz	.18
Ayat Hamid	Measurement of radiation and nuclear impact using the CR39 . detector		





<b>Sumaya Mahmoud Brace Raed</b>	<b>Environmental effects of industrial pollutants</b>	<b>Dr. Anmar Dirar Kosaj</b>	<b>.19</b>
<b>Rahma Nafie Selim</b>	<b>Local sources of heavy metal pollution</b>		
<b>Riam Abdel Rahman Omar Emad Khamis</b>	<b>Studying the optical and vibrational properties of cadmium sulfide using the density function theory</b>	<b>Dr. Bilal Kamal Ahmed</b>	<b>.20</b>
<b>Sarah Mahdi</b>	<b>Modeling using density function theory to study the electronic properties of zinc sulfide nanoparticles</b>		
<b>Zaid Omar Hussein</b>	<b>Preparation of zinc oxide by electrospray method</b>	<b>Marwa Abdel Karim</b>	<b>.21</b>
<b>Salsabil Salah Hassan Abdullah Khamis</b>	<b>Preparation of composite materials using PLb . technology</b>		
<b>Zina Sufyan and Jaid Abdul Qader Emad</b>	<b>Industrial applications of lasers</b>	<b>Marwa Abdel Karim</b>	<b>.22</b>
<b>Ahmed Khedr Mustafa Issa</b>	<b>Designing a human system to use the ZMax program</b>	<b>Dr. Mazen Hamed Hassan</b>	<b>.23</b>
<b>Abdul Aziz Mahmoud</b>	<b>Semiconductors, their properties and applications</b>	<b>Rawaa Essam Muhammad</b>	<b>.24</b>

**Fourth stage graduation research projects - evening studies for the academic year  
2019-2020**

Students names	Professor Supervisor	Research Title	ت
Rasha Hakeem	Prof. Dr. Hamed Saleh Abtan	Studying the properties of nano-solar cells	-1
HindJassem Heba Hamid	Prof. Dr. Saeed Nayef Turki	Study of the reflectivity and transmittance of some types of coatings within the near infrared spectral region	-2
Abdul Qadir Nader Ali Hussein	Prof. Dr. Ali Khalaf Obaid	First- Finding the dynamic symmetry and energy levels of some deformed nuclei Second - Studying the properties and classification of elementary particles	-3
Aisha Jabbar Saleen Eid	Prof. Dr. Saadi Khalaf	Nuclear reactors and their effects on the environment	-4
Omar Fouad Adnan is oblivious	Prof. Dr. Ahmed Hammad Monajed	Polymers: a study of their properties, types, and applications	-5
Ghada Refaat Shaemaa Abdulrahmman	Dr. Salam Khalaf Musa	Semiconductor laser, its properties, types and uses	-6
Abdullah Saadi Abdul Rahman Fadel	Dr. Mostafa Zain	Study of the properties of cadmium oxide nanostructures in the manufacture of solar cells	-7
Walid Rashid Shaiban Shaher	Dr. Omar Mahidi	Raman spectroscopy principles and uses	-8
Ibrahim Mohamed Mustafa Abdul-Jabbar	Omar Abdulaziz	Radiation measurement using high purity germanium detector	-9

