

Research Lab Sheet

Lab Name	Solid state lab
Academic Year	2022

Basic Information	
Department	physics
Location	Third floor
Total area (m²)	42 meters ²

Lab Members				
No. of Prof.	No. of Ass. Prof.	No. of Lect.	No. of Ass. Lect. & Demonst.	No. of technicians
1	1	0	1	0

Staff members

#	Name	Scientific degree	e-mail	Specializations	C.V
1	Prof.Doc.Mahrous Rashad Ahmed	Professor	mahrous_r_ahmed@yahoo.com	Material science	
2	Assistant.Prof.Hassan Ahmed Abdelghany	Assistant professor	-	Material science	-

Ass. Lecturers & Demonstrators

#	Name	Scientific degree	e-mail	Specializations	
1	Mr.Abdalrahman Muhmed Hussam	Demonstrator	muhmedabdalrahman912@gmail.com	Material science	-

Lab instruments

#	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1	Oxford electromagnet	1	good	-	No	-
2	Digital balance	2	good	-	No	-
3	Portable Digital multi meter	3	good	-	No	
4	Auto clave	1	good	-	No	-
5	Cryostat	1		poor	Yes	-
6	Vibrating sample magnetometer	1		poor	Yes	-
7	1200 Celsius furnace	1	good	-	No	-



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حاصلة على شهادة الاعتماد من الهيئة القومية
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8	Computer	2	-	poor	Yes	-
9	Vacuum rotary pump	3	good	-	-	-
10	Tube furnace	1	-	poor	Yes	-
11	Magnetic stirrer and hot plate	1	Good	-	No	-
12	Oxford tesla meter	1	Good	-	No	-
13	Lock in amplifier	1	Good	-	No	-
14	Function generator	2	-	poor	Yes	-
15	Kiethly desktop multi meter	2	-	poor	Yes	-
16	Signal amplifier	1	-	poor	Yes	-
17	Digital sweeper	1	-	poor	Yes	-



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Instruments Description

Device image	Description /use
1-	Produces DC stable magnetic field up to 2 tesla
	Can measure Wight of sample with accuracy reaches 0.0001 gm.
	Measures current , voltage, resistance , temperature, frequency
	Used for hydrothermal reactions
	Measuring electrical properties under high vacuum
	Measuring magnetic moment with temperature
	Used for drying, annealing, quenching, sintering and melting purposes
	Analysis data
	To get vacuum region
	For chemical vapor deposition reactions
	For stirring and heat treatment for chemical reactions
	Measure magnetic field
	To amplify weak ac signals
	Generating waves with various amplitudes and frequencies
	Measures current , voltage, resistance , temperature, frequency
	For current amplifying
	For sweeping ac signals

Evaluate the fulfillment of lab to appropriateness of areas, building installations, facilities and human resources standards

Areas of assessment		Indicators	Yes	Somewhat	No
Floor area and capacity	1	Adequacy of the total capacity of the lab for the number of researcher (1).	yes		
Windows and doors	2	Availability of windows for adequate ventilations.	yes		
	3	Ease of use of windows.	yes		
	4	There are two exits (doors) at least (2).			no
	5	There are signs to locate directions of emergency exits	yes		
Equipment	6	Appropriate temperature during the lectures (3).	yes		
	7	Availability of good ventilation (4).	yes		
	8	The existence of adequate lighting (4).	yes		
	9	Lab is connected to the Internet	yes		
	10	The existence of directions inside the Lab showing entrances and emergency exits.	yes		
Security and Safety	11	Existence of firefighting equipment near the hall (5).	yes		
	12	Cleanliness of the room.	yes		