



## بحوث الخطة العلمية البحثية لقسم الفيزياء لسنة 2022-2023 م

ت	الملاحظات	أسم الباحث	أسم البحث
1	مشترك	د. جنان مجيد المخ	Time dependent electron transport through a quantum dot assisted by electromagnetic field : The role of electrodes dimensionally
2	مشترك	د. جنان مجيد المخ	Time dependent electron transport through a double quantum dot assisted by electromagnetic field in The presence of nonresonant channels
3	د. سندس جمعة فاخر	د. فرات أحمد مهدي	Fabrication of high performance nanoscale flexible organic field effect transistors
4	منفرد	د. سندس جمعة فاخر	Basis streets effects on flexible organic thin film transistors (OTFTs) nanostructure
5	مشترك	د. فرات أحمد مهدي	Optimization and characterization of doped photo active P&HT:ICBN for organic optoelectronic applications
6	مشترك	د. فرات أحمد مهدي	Investigation of the optical and electrical properties of doped/ undoped QUPD and OTPD thin film for organic semiconductor devices
7	مشترك	د. فرات أحمد مهدي	Performance optimization of the active layer P3HT:PCBM nanoparticles for organic Photovoltaic applications
8	مشترك	د. فرات أحمد مهدي	Preparation and characterization of doped P3HT:ICBA nanoparticle for photonic applications.
9	منفرد	د. محمد فاضل	Preparation and optical characterization of nanoparticle organic photoactive layer using new fullerene
10	منفرد	ألاء منذر شري	All optical switching and nonlinear optical properties of curcumin derivatives
11	منفرد	د. أباذر رحمن أحمد	The role of electric field effect in the chemisorptions of atom on decorated graphene sheet
12	مشترك	د. فرات أحمد مهدي	Investigation of the optical limiting , all optical switching and the nonlinear optical properties for synthesized metal shiffbas complexes
13	منفرد	شذى سامي عبادي	Optical properties of PVP blend (Alizarin organic,



			Phenol red are crom black )dyes
14	مشترك	د. فرات أحمد مهدي	High performance gas sensor based on cobalt nanopartical /doped poh/aniline
15	مشترك	د. فرات أحمد مهدي	High sensitive gas sensor based on Poly(3-hexyl-thiophene(P3HT)/metal electrode thin film
16	سجى جعفر معتوق	د. حسن عبدالله سلطان	Direct modulation effect on semi conductor laser frequency output dynamics
17	مشترك	د. فرات أحمد مهدي	Using diffraction ring patterns to determine the nonlinear refractive index of doped conductive polymers.
18	منفرد	د. عامر حسين علي	Verification of new device for thermal conductivity measurement of fluid
19	د. قصي محمد	د. عامر حسين علي	Thermal and optical nonlinear properties of Sudan III
20	ندى كامل خصاف	د. جنان مجيد المخ	The role of correlation energy in the spin transport through quantum dot coupled to ferromagnetic leads in the presence of electron- phonon coupling
21	د. جنان مجيد المخ	ندى كامل خصاف	The spin heat generation tuning by gate voltage through spin transportation quantum dot coupled to ferromagnetic leads in the presence of electron-phonon coupling
22	مشترك	د. رياض جاسب أبو الهيل	Preliminary <sup>222</sup> Rn Concentration Study Using CR-39 Detector in Some Houses of Garimat Ali, Basrah Governorate, Iraq
23	مشترك	د. رياض جاسب أبو الهيل	In-Vitro Release, and Theoretical Study of the Adsorption Process of Rifampicin into Sodium Alginate / Chitosan polyelectrolyte micro - particles Using DFT Methods
24	مشترك	د. رياض جاسب أبو الهيل	Morphology, electrical and Third-order optical nonlinearity of carbon black in epoxy resin.
25	مشترك	حسن كاظم أبراهيم	Morphology and optical limiting behaviour of ZnS doped with Ethyl green thin film.
26	مشترك	د. حسين علي بدران	Effects of temperature on structural and Linear/Nonlinear Optical properties of CdS Nanoparticles film deposited by Chemical Reaction Method
27	مشترك	د. حسين علي بدران	Preparation and characterization of tin chloride-based polymeric composite for gamma shielding applications
28	مشترك	د. حسين علي بدران	Environmental Radiation Dosimetry for school buildings, hospitals and health centers in Babil Governorate-Iraq using TL-technique
29	مشترك	د. حسين علي بدران	Preparation and characterization of tin chloride-based polymeric composite for gamma shielding applications



30	مشترك	د. حسين علي بدران	Preliminary $^{222}\text{Rn}$ Concentration Survey in Some Houses of Garmat Ali of Basrah governorate in Iraq Using CR-39 Detector
31	مشترك	د. حسين علي بدران	Environmental Radiation Dosimetry for school buildings, hospitals and health centers in Babil Governorate-Iraq using TL-technique
32	مشترك	د. حسين علي بدران	Preparation, DSC analysis and The third-order behavior studies of a conducting polymer
31	مشترك	د. أحمد جاسم حمود	The influence of nickel acetate $\text{Ni}(\text{CH}_3\text{CO}_2)_2$ concentrations on the optical properties of compound (Zinc Oxide, Aluminum Oxide) based on Epoxy resin.
32	مشترك	د. أحمد جاسم حمود	The influence of palm frond ash on the mechanical characteristics of polypropylene (PP) was investigated
33	مشترك	د. أحمد جاسم حمود	Study of mechanical and combustion properties of polyurethane polymer and waste tire powder
34	مشترك	د. أحمد جاسم حمود	The shielding properties of high-density polyethylene modified with Iraq Rice Husks.
35	مشترك	د. أحمد جاسم حمود	Enhancement efficiency of polymer ZnO solar cell with metal oxide nanoparticles in PEDOT-PSS layer by different treatment annealing
36	مشترك	د. فرات أحمد مهدي	Enhanced performance of organic schottky diodes based on cobalt chloride ( $\text{CoCl}_2$ ) doped Poly(3-hexythiophene) (P3HT)
37	مشترك	د. فرات أحمد مهدي	Improving the electrical conductivity and photoconductivity of the photo active layer P3HT:PCBM doped by schiffbase for organic solar cell applications
38	مشترك	د. فرات أحمد مهدي	Effect of doping metal schiffbase complexes on the structure optical and electrical properties of P3HT thin film for organic optoelectronic device
39	مشترك	د. فرات أحمد مهدي	An-Pd ultra thin layer to optimize the electrical and optical properties of doped/ undoped P3HT active layer based organic semiconductor device
40	مشترك	د. جبار حافظ جبر	Enhancement of nonlinear properties of mixture of azo-B-diketone with PMMA film by the gamma radiation
41	مشترك	رنا عزيز عبيد	Natural Radioactivity Measurement for Some Local and Imported Rice In Iraq Using Gamma Spectrometry Sodium Iodide $\text{NaI}(\text{TI})$
42	مشترك	د. سوسن شريف	Gamma radiation effect on the optical linear and nonlinear properties of PVA with trypan blue film
43	منفرد	د. ثائر منشد سلمان	Boron concentration in water sample from the Al-Zubair area was determined using carmine method



44	منفرد	د. ثائر منشد سلمان	Using carmine technique the content of boron was measured in water samples in waist Governorate
45	مشترك	مي جاسم عاشور	Nonlinear optical properties and characterization and the all-optical switching of curcumin
46	مشترك	الاء منذر شري	All optical switching and nonlinear optical properties of curcumin derivatives
47	مشترك	فاضل عباس طعمة	Effect of gamma ray on self-induced diffraction patterns of organic compound Poly (methyl-methacrylate) films
48	مشترك	فاضل عباس طعمة	Azimuthal angle scan distribution, third order response, and optical limiting threshold of the Bismarck Brown Y:PMMA film.
49	مشترك	رياض جاسب أبو الهيل	Effect of 1,4-dihydroxyanthraquinone dye on the dispersion parameters of poly(methyl methacrylate) polymer composites
50	مشترك	فاضل عباس طعمة	Synthesis, Surface morphology, Gas sensor, DSC Technique and Third-order behavior of conducting polymer
51	منفرد	د. أشواق فيصل جعفر	Rotational energy of multiquasiparticle state for the superheavy nuclei with N=152
52	مشترك	د. رياض جاسب أبو الهيل	Particle size effects and Initial rise method studies to improve Thermoluminescence Properties of NaCl crystals
53	مشترك	د. فرات أحمد مهدي	Resonant cavity enhanced InAs/GaAsSb SLS LEDs with a narrow spectral linewidth and a high-spectral intensity operating at 4.6μm
54	مشترك	فاضل عباس طعمة	Curcumin Analogue Spectral, Nonlinear Optical Properties and All-optical Switching Using Visible, Low Power Cw Laser Beams



الاستاذ الدكتور  
جبار منصور خلف شوكة  
رئيس قسم الفيزياء