| ت | اسم البحث | اسم الباحث/ الباحثين | اسم المجلة المجلد/العدد/رقم الصفحة | الدولة المنشور فيها | سنة النشر | Impact factor | abstract |
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| 1 | Development of a tracking system for parabolic concentrators | **Dr.Kareem K.Jasim** | التربية الاساسية Vol.17 2011 No.67 | العراق | 2011 | | solar This research includes the development of a self-tracking system for concentrators which can increase the gained solar energy. This system is specified by using the generated power from the solar cells to feed the tracking system directly. In other words the electrical power needed is self generated.Therefore, this system can be used in agricultural places in our country. The other side of the work in this research is using advanced technique for tracking the solar collectors. The design combines a Field Programmable processor with two-axis motor tracking controller to integrate such as microprocessor, memory, and input/output into one Altera Field Programmable based on system-on-programmable-chip concepts. |
| 2 | The Wind Energy of IRAQ | **Dr.Kareem K.Jasim** | VOL. 17 2011 No..69 | العراق | 2011 | | **تعتبر طلبات القدرة فى هذه الايام متناسبة مع الكميات المتولدة من الطاقة الكهربائية بالطرق التقليدية البخارية والحرارية. يتضمن البحث دراسة الاحوال الجوية فى مختلف محافظات القطر العراقى لغرض الوصول الى تخصيص الاماكن الملائمة لنشر المراوح الهوائية فى القطر للحصول على اقصى قدرة ممكنة على مدار ايام السنة. وتعتبر الطاقة البديلة ذات انتشار واسع فى الايام الحالية مما يؤدى بالنتيجة الى ازياد المشاكل فى طرق انتاجها ونشرها. ويتاتى بعض هذه المشاكل من طرق ربطها بالشبكة الكهربائية وبعضها من مقاومة المجتمع لتشرها بسبب مساوٗوها. تم نشر النتائج للقدرات المنتجة فى المحافظات المختلفة وحسب قراءات الانواء الجوية على شكل بيانى (هستروكرام) لاختيار المناطق الاكثر صلاحية لنشر المراوح الهوائية فى القطر.** |
| 3 | Modeling and Simulation of a modern renewable energy to be used in a urban and far Iraqi areas | **Dr.Kareem K.Jasim** | Vol. 17 2011 No.68 | العراق | 2011 | | This research aims to model and simulate the transient and steady state behavior of wind turbine systems. This work could have a broad scope, that being the ease, in aims to lay groundwork which will allow for further investigation and for the development of a more sophisticated micro-turbine model. More specifically it involves modeling a micro turbine and a wind turbine block sets, and time allowing combining these models to form a micro-grid. Currently models of a wind turbine and a gas turbine have been developed. These are connected to a load and the mains power supply. More accurate results will be achieved for the wind and micro-turbine. Also, it is hoped that the sources will together power a single load. |
| 4 | Design and Simulation of Hybrid system for electricity generation in Iraqi regions | Dr.Kareem K Jasim, Dr.Kussay abdul-jabbar, Mr.Mohammad Reda Jawad | Diyala University Engineering College 2012 | العراق | 2012 | | This work deals with the design and implementation of a solar-wind system used to irrigate the agricultural Iraqi areas in the far and desert areas. The wind and solar resource in the area was analysed in order to establish the system's expected energy output over a year. The water balance was also considered to establish how much water can be collected and if it will satisfy the garden's requirements. It was subsequently possible to suggest two specific pumps that can be used for the system. The results of this analysis show that the system cannot be standalone. The collectable water will not be enough to satisfy the system's requirements for 6 months of the year. It is also clear that the modules and generator are oversized for the system, and that the wind contribution is significantly smaller than that from the modules. In conclusion, other applications, such as fans for room ventilation, are suggested to make use of the excess energy therefore increasing the system's efficiency. |

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| The aim of this project is to show how to produce the electricity from photovoltaic solar cells and there are experiment proofing that and overview of techniques and principles of cell design. The remaining challenge is to find accost-effective way to apply these principles to construct a low-cost solar cell with high and stable efficiency.<br>Photovoltaic (PV) cells have social and commercial value only when they are used in a system to provide a service. This research has given a brief overview of the technical and economic considerations that allow the cells to provide such a service. | | 2012 | العراق | Vol.18 2012 No.75 | Dr.Kareem K Jasim, Dr.Jabbar K. | .Effect of Environmental Conditions on Silicon Solar Cells | 5 |
| In this work the design, construction and testing of a photovoltaic-powered reverse-osmosis (PV-RO)desalination system is presented using Matlab. The system operates from seawater and requires no batteries, since the rate of production of freshwater varies throughout the day according to the available solar power. Initial testing of the system, with the modest solar resource available in Iraq, provided freshwater at approximately 1.5 m3/day. Nearer to the equator and with a PV array of only 2.4 kWP, a software model of the system predicts production of over 3 m3/day throughout the year. The system employs a Clark pump brine-stream energy recovery mechanism and this, coupled with variable water recovery ratio, achieves a specific energy consumption of less than 4 Three motors and pumps are employed and provide good energy and cost efficiency.<br>Testing and modelling of the system components in MATLAB-Simulink is presented, together with a discussion of the full system modelling and design procedure, in which the aim was to minimise the cost of water. | | 2012 | العراق | Vol.18 2012 No.75 | Dr.Kareem K Jasim | Design and Simulation of a desalination system | 6 |
| هذا البحث يتعامل مع التحليل الحرارى وتصميم لوحة الدوائر المطبوعة لحساب التاثير الحرارى المتولد على اجزاء اللوحة حيث تم تقييم البيانات وتوزيع درجة الحرارة على اللوحة فى حالة الاستقرار الحرارى مع الاخذ بنظر الاعتبار قيم تقريبية حقيقيةPCB. | | 2013 | العراق | Proceeding of national renewable energies conference and their applications | Dr.Emmad Kasim, Dr.Kareem K Jasim, Mr. Sabbah abdul-hassanw | Thermal design and analysis of printed circuit board for optimum performance 2013 pages150-161 | 7 |
| In this work we study one of single phase control way to be used in low and medium power systems. These power systems used in designing solar and wind energy sources. As examples the hybrid vehicles , solar houses and hospitals that need clean , efficient and steady state energy sources. | | 2013 | العراق | Vol.19 2013 No.19 Vol.19 2013 No.19 | Dr.Kareem K Jasim, Eng. Mahdi Sarhan | study and implementation of a controller used in a full-bridge inverter of distributed generation systems | 10 |
| The operation of photovoltaic solar cells at low tempertaures($T$ < 300K) was analysed and | | 2014 | العراق | Vol.20 2014 | Dr.Kareem | Comparing | 11 |

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| studied. The efficiency at which a GaAs solar cell converts light into electrical power was measured as a function of temperature. The efficiency was found to increase as temperature decreased and then begin to plateau at *T »* 100K. These results can be explained by a decrease in energy loss from emission of radiation(radiative recombination) and most importantly a decrease in the activity of electronic defects in the solar cell . Computer simulations showed that the relative contribution of radiative and Shockley-Hall recombination increases towards the ideal radiative regime at low temperatures providing an environment which can be considered to be free of parasitic losses due to Shockley-Hall recombination however experimentally this was found not to be the case due to the complex behaviour of Shockley-Hall capture cross section with temperature.<br>Building of experimental setup and all experimental measurements were simulated by Matlab/Simulink. | | | | No.82 | K Jasim, Dr.Kussay Abdul-Jabbar, Dr.Madi Abdul-Hussian | between air and water cooling on the performance and efficiency of solar cellS | |
| *in this work we built a smart PV SOLAR system to be used in Agricultural areas in Iraq. This system is very*<br>*efficient to be used in urban and far areas. This research deals with the design and simulation of a simple but*<br>*efficient photovoltaic water pumping system. It provides theoretical studies of photovoltaics and modeling*<br>*techniques using equivalent electric circuits. The system employs the maximum power point tracker (MPPT). The investigation*<br>*includes discussion of various MPPT algorithms and control methods. The work decides on the output sensing direct*<br>*control method because it requires fewer sensors. This allows a lower cost system. Comparisons with the system without*<br>*MPPT in terms of total energy produced and total volume of water pumped per day. The results validate that MPPT can significantly*<br>*increase the efficiency and theperformance of PV water pumping system compared to the system without MPPT.* | 1.8 | 2014 | الهند | **Paripex Indian research journal vol:4 Issue:6 June 2014 ISSN-2249-555X** | **Dr.Ali Al-hamadani Dr.Kareem K. Jasim Eng. Mahdi Sarhan** | **Application of PV smart solar system for agricultural purposes in IRAQ Paripex Indian research journal** | 12 |
| *This work deals with the design and implementation of a solar-wind system used to irrigate the agricultural*<br>*Iraqi areas in the far and desert areas. The wind and solar resource in this area was analyzed in order to establish*<br>*the system's expected energy output over a year. The water balance was also considered to establish how much water*<br>*can be collected, and if it will satisfy the garden's requirements. It was subsequently possible to suggest two specific pumps*<br>*that can be used for the system.The results of this analysis show that the system cannot be standalone. The collectable*<br>*water will not be enough to satisfy the system's requirements for 6 months of the year. It is also clear that the modules and*<br>*generator are oversized for the system, and that the wind contribution is significantly smaller than that from the modules. In*<br>*conclusion, other applications, such as fans for room ventilation, are suggested to make use of the excess energy therefore*<br>*increasing the system's efficiency.* | 1.8 | 2014 | الهند | **Paripex Indian research journal vol:4 Issue:7 July 2014 ISSN-2249-555X** | **Dr.Kareem K.Jasim Dr.Jaffar Ali Kadhim Dr.Mahdi Ali Abdul-hussien** | **Design and construction of hybrid solar-wind system used for irrigation projects** | 13 |
| *This study aims to give a comprehensive state-of-the-art review of the self-cleaning glazing products available* | 1,8 | 2013 | الهند | **Volume:3 Issue: 11 Nov 2013 ISSN-** | **Dr.Kareem** | **Improvem** | 14 |

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| *on the market today and investigate methods for measuring the self-cleaning effect. Various future research pathways and opportunities for the self-cleaning products of tomorrow are also explored within this study, with emphasis on solar energy application areas such as daylight, solar radiation transmission, electrochromism, building integrated photovoltaics (BIPV), solar cell glazing and solar cells in general. Self-cleaning products from several manufacturers that utilize two different self-cleaning technologies of either photocatalytic hydrophilic or hydrophobic capability are presented.* | | | | **2249-555X** | **K.Jasim Mr.Haider Shareef Eng. Mahdi Sarhan** | **ent of the performance of self cleaning solar panel Paripex Indian research journal** | |
| *The energy demands of today are vast and require generation of large quantities of electrical power. This demand has typically been met with use of fossil fuels but the world has set aspirations and targets to reduce emissions from power generation and increase the role of renewable energy technologies. Renewables have typically been utilized on large scale developments to address this situation but this raises problems. The intermittent nature of renewables on the grid, the remote locations far from points of utilization and public opposition to developments of wind farms especially. This research evaluate the reliability of investigation the possibility of using the wind energy in each Iraqi governorate and the utility of this clean energy depending on an actual and official data. The results are presented in histograms to the comparison more easy and to led to acceptable decisions.* | 1.8 | 2013 | الهند | **Paripex Indian research journal vol:2 Issue:10 Oct.2013 ISSN-2250-1991** | **Dr.Kareem K.Jasim** | **Evaluation of the electrical wind energy in IRAQ** | 15 |