

Patent Selections:

The patents annotated in this section have been selected from various patent databases. These recent patents are relevant to the articles published in this journal issue, categorized by different applications of electrical power supply, electrical systems, power transmission, electromagnetism, motor control process and technologies involved and related to electrical engineering.

ULTRASOUND & SEMICONDUCTOR DEVICES

1. G. Holm, L. Matthias, K. Frank and G. Michael, "Assessing Metal Stack Integrity in Sophisticated Semiconductor Devices by Mechanically Stressing Die Contacts", U.S. Patent 8479578, July 9, 2013.
2. I. Chikao, S. Kentarou, H. Kazuhito, O. Takuji, Y. Keisuke and I. Kazuhiro, "Semiconductor Device, Substrate for Producing Semiconductor Device and Method of Producing them," U.S. Patent 8525351, September 03, 2013.
3. K. Osamu, K. Yutaka and S. Kohei, "Ultrasonic Horn," U.S. Patent 8511534, August 20, 2013.
4. T. Hiromitsu, T. Tsuyoshi, K. Keiko, F. Hiroaki, Y. Shingo, "Manufacturing Method For Semiconductor Package, Semiconductor Package, and Semiconductor Device," W.O. Patent 2013057949A2, April 25, 2013.
5. C. K. Kaisha, "Semiconductor Device, Method of Manufacturing The Same, and Solid-State Image Sensor," U.S. Patent 20130214374A1, September 22, 2013.
6. W. Tomofumi and H. Hideki, "Semiconductor device with anti-shake control function," U.S. Patent 8564676, October 22, 2013.
7. N. Masafumi, "Failure Analysis Method, Apparatus, and Program for Semiconductor Integrated Circuit," U.S. Patent 8478022, July 02, 2013.
8. S. Satoshi, "Semiconductor Device and Method of Manufacturing the Semiconductor Device," U.S. Patent 8476726, July 02, 2013.

SONOCHEMISTRY

1. B. Damon, F. M. Edward, A. Arshad, D. Tim, P. J. Graham and P.-P. Garham, "Method and Device for Whitening Teeth Using Sonochemistry," U.S. Patent 20130004912A1, January 03, 2013.
2. W. Xikui, W. Chen and G. Weilin, "Sonochemistry Preparing Method of Nitrogen and Rare Earth Element Codoped Nanometer Titania Crystal," C.N. Patent 103127885A, June 05, 2013.
3. O. Yasuhiro and H. Atsuya, "Piezoelectric Generator, Sensor Node, and Method of Manufacturing Piezoelectric Generator," U.S. Patent 8575824, November 05, 2013.
4. H. Norihiro, K. Hajime and H. Ippei, "Method for Producing Piezoelectric Composite Substrate and Method For Producing Piezoelectric Element," U.S. Patent 8572825, November 05, 2013.

5. P. J. Ho, "Piezoelectric Resonator And Electrode Structure Thereof," U.S. Patent 8569936.
6. L. Lin, H. Jie and L. Huan-Tang, "Piezoelectric Vibrator And Electronic Device Using Same," U.S. Patent 8569931, October 29, 2013.

ADIABATIC COMPUTING

1. B. Dave, C. Gregory and F. Steven, "Quantum Computational Device Employing Multi-Qubit Structures And Associated Systems And Methods," U.S. Patent 8513647, August 20, 2013.
2. H. L. Chung and L. Jing, "Energy-Efficient Row Driver For Programming Phase Change Memory," W.O. Patent 2013095870A1, June 27, 2013.
3. B. Anindya and M. John, "Stepped Voltage Drive For Driving Capacitive Loads," U.S. Patent 8575975, November 05, 2013.
4. V. Dilip, C. Jiaoyan, P. Emanuel, and S. Michel, "An Ultra Low Power Nine Transistor Static Random Access Memory Cell," E.P. Patent 2600349A1, June 05, 2013.

NANOMETER CMOS PROCESSES

1. B. P. Randall, A. F. Frederick, B. O. Daniel, R. J. Daniel and T. Adam, "Stacked Integrated Component Devices with Energization," W.O. Patent 2013112868A1, August 01, 2013.
2. D. John, B. K. Stephen, C. Timothy and M. Elton, "Vertical Integration of Cmos Electronics with Photonic Devices," W.O. Patent 2013109955A1, July 25, 2013.
3. W. C. Hsing, C. Chih-Chieh and C. Yi-Wei, "System and Method for Observing Threshold Voltage Variations," U.S. Patent 8547131, October 01, 2013.
4. S. Jan and H. Anco, "Finfet Transistor with High-Voltage Capability and Cmos-Compatible Method for Fabricating the Same," U.S. Patent 8541267, September 24, 2013.
5. Y. Alon, "Electrostatic Discharge (Esd) Protection Circuit and Method for Designing Thereof for Protection of Millimeter Wave Electrical Elements," U.S. Patent 8504952, August 06, 2013.

RELEVANCE VECTOR MACHINE

1. M. B. Dave, M. C. Gregory and T. F. Steven, "Quantum Computational Device Employing Multi-Qubit Structures And Associated Systems and Methods," U.S. Patent 8513647, August 20, 2013.

2. H. L. Chung and L. Jing, "Energy-Efficient Row Driver for Programming Phase Change Memory," W.O. Patent 2013095870A1, June 27, 2013.
3. H. A. Mohammad, "Methods of Adiabatic Quantum Computation," U.S. Patent 8504497, August 06, 2013. B. Anindya and M. John, "Stepped Voltage Drive for Driving Capacitive Loads," U.S. Patent 8575975, November 05, 2013.
4. V. Dilip, C. Jiaoyan, P. Emanuel and S. Michel, "An Ultra-Low Power Nine Transistor Static Random Access Memory Cell," E.P. Patent 2600349A1, June 05, 2013.

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1. Y. Nobuhiro, "Fault Diagnosis Data Recording System And Method," E.P. Patent 1839150B1, November 13, 2013.
2. N. Masayasu, "Fault Diagnosis Device for Reducing Agent Supply Device, and Reducing Agent Supply Device," E.P. Patent 2660437A1, November 06, 2013.
3. P. Kyong-Ha, H. Hyun-Su and S. Seung-Seop, "System, Method, and Apparatus for Performing Fault Diagnosis for an Electronic Appliance," E.P. Patent 2648393A1, September 09, 2013.
4. S. takanori, "Fault Diagnosis System for Gas Sensor," E.P. Patent 2587255A4, October 09, 2013. A. Kenta, F. Moritaka, K. Kohei and Y. Kento, "Control Device for Solenoid Valve Driving Circuit and Fault Diagnosis Method," W.O. Patent 2013145980A1, October 03, 2013.
5. S. J. hun, Y. G. jong and H. H. mi, "Fault Diagnosis Method of Grid-Connected Photovoltaic System and Apparatus Thereof," K.R. Patent 2013106532A, September 30, 2013.
6. G. Sandesh and P. Danil, "Collaborative Multi-Agent Vehicle Fault Diagnostic System and Associated Methodology," U.S. Patent 8543280, September 24, 2013.

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1. X. zongyi, J. haiyan, L. ping, L. jianwei, M. lingli and G. xiang, "Optimized and Improved Fuzzy Regression Model Construction Method Based on Nondominated Sorting Genetic Algorithm Ii (Nsga- Ii)," C.N. Patent 103198359A, July 10, 2013..
2. C. Y. chieh, C. C. chi, T. Y. zong and L. Y. feng, "A Method of Detecting Variance by Regression Model," T.W. Patent I399660B, June 21, 2013
3. W. jiangdong, Y. bingxin, Z. xia, W. yintong, S. bo and J. jian, "Fuzzy Regression Based Airport Noise Predicating Method and System," C.N. Patent 102999667A, March 27, 2013.
4. K. Peter, T. Stephan, U. Len and W. L. Nathan, "System And Method of Identifying When a Patient Undergoing Hemodialysis is at Increased Risk of Death by a Logistic Regression Model," E.P. Patent 2561457A1, February 27, 2013.

5. S. LI, X. gengjian and S. jun, "Target Detection Method Based on Linear Regression Model," C.N. Patent 102270347B, February 27, 2013.
6. P. H. James, "System Of Sequential Kernel Regression Modeling for Forecasting and Prognostics," W.O. Patent 2013012584A1, January 24, 2013.

NEURO-FUZZY INFERENCE SYSTEM

1. K. robert and D. P. radu, "Audio Communication Device, Method for Outputting an Audio Signal, and Communication System," C.N. Patent 102870156A, January 09, 2013.

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1. K. S. shin, K. J. min, J. E. kook and K. J. yong, "Fuzzy Inference System and Method," K.R. Patent 2013099672A, September 06, 2013. .
2. L. I. yueyang, S. jun and L. H, "Image Noise Detection Method Based on Self-Adaptive Nerve Fuzzy Inference Systems," C.N. Patent 03198457A, July 10, 2013.
3. T. W. Yip, "Fuzzy-Learning-Based Extraction of Time-Series Behavior," U.S. Patent 8332346, December 11, 2013.

PASSIVE FILTERING

1. O. Dermot and B. Donal, "Clock Generator for Crystal or Ceramic Oscillator and Filter System for Same," W.O. Patent 2013169524A1, November 14, 2013.
2. T. Hiroaki, "Power Factor Measurement Device," W.O. Patent 2013168428A1, November 14, 2013.
3. P. Raymond and A. Erdogan, "Upstream Bandwidth Conditioning Device," U.S. Patent 8584192, November 12, 2013.
4. L. P. Giuseppe and F. Michael, "Polar Modulator and Method for Generating a Polar Modulated Signal," U.S. Patent 8583060, November 12, 2013.
5. F. K. Kevin, G. B. Richard, M. Lenore, F. B. Robert, C. Sujoy, E. H. Donna and H. W. Tyler, "Low-Pass Filtering of Compressive Imaging Measurements to Infer Light Level Variation," U.S. patent 8570406, October 29, 2013.
6. D. Ruiqiang, "Wireless Local Network (Wlan) Device And Method for Suppressing Interference by Wlan Device," W.O. Patent 2013155831A1, October 24, 2013.
7. E. C. Arthur, "Angle Of Incidence Selective Band Pass Filter for Implantable Chemical Sensor," W.O. Patent 2013163298A1, October 31, 2013.
8. D. Ruiqiang, "Wireless Local Network (Wlan) Device And Method for Suppressing Interference by Wlan Device," W.O. Patent 2013155831A1, October 24, 2013.

PHOTOVOLTAIC SYSTEM

1. F. Andreas, B. Bernhard, G. A. Philipp and N. Frank, "*Photovoltaic System And Method For Operating a Photovoltaic System for Feeding Electrical Power Into a Medium-Voltage Network*," W.O. Patent 2013167407A1, November 14, 2013.
2. G. Feng, "*Novel Photovoltaic System*," W.O. Patent 2013163778A1, November 07, 2013.
3. P. Andreas, R. Guenter and O. B. Friedrich, "*Method For Detecting Arcs in Photovoltaic Systems and Such a Photovoltaic System*," U.S. Patent 8576520, November 05, 2013.
4. K. Hossein, S. H. Viggo and H. Brian, "*Photovoltaic Array Ground Fault Detection Method for Utility-Scale Grounded Solar Electric Power Generating Systems*," U.S. Patent 8564916, October 22, 2013.
5. B. Bernhard, "*Photovoltaic System with Controllable Negative-Pole Earthing*," W.O. Patent 2013152839A1, October 17, 2013.
6. B. Uwe, F. Wendelin and H. Oliver, "*Vehicle For Carrying Out Work on a Solar Module or Solar Collector*," W.O. Patent 2012168070A3, October 10, 2013.
7. B. T. Borisovich and L. Anatoli, "*Photovoltaic System Data Handling Methods and Apparatus*," W.O. Patent 2013148215A1, October 03, 2013.
8. S. J. Zachary and J. Keith, "*Photovoltaic Systems with Local Maximum Power Point Tracking Prevention And Methods for Operating Same*," W.O. Patent 2013147942A1, October 03, 2013.
9. T. P. Minh, "*Photovoltaic System and Method*," W.O. Patent 2013138862A1, September 26, 2013.
10. H. Matthias and P. Frank, "*Inverter, Photovoltaic System, And Operating Method for Limiting the Installation to a Predefined Percentage of the Installed Module Power*," W.O. Patent 2013017630A3, September 26, 2013.
11. C. Yuan and L. Chang, "*Photovoltaic System Having Burp Charger Performing Concept of Energy Treasuring and Recovery and Charging Method Thereof*," U.S. Patent 20130249466A1, September 26, 2013.