

Patent Selection

The patents annotated in this section have been selected from various patent data bases. These recent patents are relevant to the articles published in this journal issue, categorized by different nanotechnology methods, processes and techniques in

ANTIBACTERIAL

1. Atsushi T, Tsuguo K. Antibacterial deodorant. US8486433, 2013.
2. Kouichirou S, Koji Y. Antibacterial Auxiliary Agent Comprising Kombu Extract as Active Ingredient, Antibacterial Composition, and Food or Beverage. EP2540307A4, 2013.
3. Sataro S. Sheet-Like Antibacterial Agent, Antibacterial/Antifungal Metal Ionized Water, Packing Material, And Cosmetic. JP2013099919A2, 2013.
4. Yoshinao K. Antibacterial Resin Composition Derived From Master Batch, Antibacterial Fiber, Antibacterial Film, And Method For Producing Antibacterial Resin Composition Derived From Master Batch. EP2530120A4, 2013.

DISINFECTION

1. Gregory F, Sin P, Natalie S and *et al.* Materials for Disinfection Produced By Non-Thermal Plasma. WO2012018891A2, 2012.
2. Victor FM, Joshua PM, Steven EL. Medium chain peroxycarboxylic acid compositions. US8057812, 2011.
3. Bradley JE. Organic compound and metal ion synergistic disinfection and purification system and method of manufacture. US8173067, 2012.
4. Philip T, Christian T. Cleaning disinfection and indicator agent. US8083966, 2011.

DISINFECTION BY-PRODUCT

1. David K, Vance F. Use Of Moss To Reduce Disinfection By-Products In Water Treated With Disinfectants. WO2013036601A1, 2013.
2. Boong IkJ, Jung Sik K, Hyun Su S, Sang Seek B, Kyong L, Young Jae L. Highly Efficient Sodium Hypochlorite Generation Apparatus Capable Of Decreasing Disinfection By-Products. WO2013089366A1, 2013.
3. Yan J, Pei C. Removal of microorganisms and disinfection byproduct precursors using elemental iron or aluminum. US8114279, 2012.
4. Gary Lynn E, Michael Andrew B. Real-time, on-line analysis for the quantification of trihalomethane species within drinking water supplies. US8336371, 2012.

PHOTOCATALYSIS

1. Francisco José DV. Microbicidal Shaving System Using Heterogeneous Photocatalysis, Generated By Radiating Light Onto Nanoparticles. WO2013116911A1, 2013.
2. Sang Ho K, Woo Ram L, Young Soo L. Core-shell type nanoparticles comprising crystalline metal-oxide shell and method for preparing the same. US8343577, 2013.
3. Paul CB, Joseph AK, Keating, Raymond R J, Timothy NB, Prativadi BN, Bernd JN. Passive over/under voltage control and protection for energy storage devices associated with energy harvesting. US8350519, 2013.
4. Steven YR, Thomas DJ. Nanostructures, Systems, and Methods for Photocatalysis. US20120267234A1, 2012.

NANOFLUIDS

1. Bunshi F, Kai Johan J. Nanofluid Magnet Vehicle Wheel Generator And Manufacturing Method Thereof. WO2013053213A1, 2013.
2. Amanchi Bala S S, Aamanchi Raghavendra Bhagyaraj K, Amanchi Vamsi Phanindra K, Amanchi A. A Novel Process of Preparing Nano Metal And The Products Thereof. WO2013104976A1, 2013.
3. Krishna SR, Sumitesh D, Gobinath N and *et al.* A Process For Determining Lubricant Composition In A Vapor Compression Refrigeration System To Enhance The Co-Efficient Of Performance. WO2012156980A1, 2012.
4. Laforgia D, Colangelo G, Milanese M, De Risi A. Heat transfer medium with nanofluids for a thermodynamic solar system. EP2557373A1, 2013.

RHEOLOGY

1. Ou Z, Lai Z, Blair C, Cheng C-M. Toner process including a rheology modifier. EP2259145B1, 2013.
2. Koehler E, Roberts M F. Multivariate Management of Entrained Air and Rheology in Cementitious Mixes. WO2013089663A2, 2011.
3. Wells RL, Royce DA, Johnson ES, Hilvert JE, Heath B P. Shampoo containing a gel network. US8349301, 2013.
4. Debon SJJ, Vanhemelrijck JGR, Baier SK, Guthrie BD. Tribology device for assessing mouthfeel attributes of foods. US8342032, 2013.

CRITICAL HEAT FLUX

1. Rops CM, Velthuis JFM, van der Graaf F, Geers LFG. Multiple connected channel micro evaporator. US8475626, 2013.
2. Tonkovich AL, Arora R, Kilanowski D, Daymo E. Process for treating and/or forming a non-newtonian fluid using microchannel process technology. US8298491, 2012.
3. Müller H, Wormald PS, Bavaj P. Flame Retardant Carpet Products With Coating and/Or Adhesive Layers Formed From Vinyl Acetate/Ethylene Copolymer Dispersions. WO2012020319A2, 2012.
4. Yodo T. Critical Heat Flux Prediction Device, Critical Heat Flux Prediction Method and Safety Evaluation System. EP2613324A1, 2013.

HEAT-TRANSFER COEFFICIENT

1. Kusunoki Y, Ban N, Miura T. Float Glass Production Device, And Float Glass Production Method Employing Same. WO2013024649A, 2013.
2. Chen H, Xu J, Wang W. Internal Liquid Separating Hood-Type Condensation Heat Exchange Tube. WO2013016943A1, 2013.
3. Koppikar SR, Chaudhari VA, Nasikkar P S, Cherukupalli NS. Solar Module Heat Transfer System. WO2013100857A2, 2013.
4. Xia H, Guida R, Wu J, Busboom A, Bantug A, Chamarthy P. Gas detection system incorporating fiber gas sensors having fiber bragg gratings. US8542955, 2013.

THERMAL CONDUCTIVITY

1. Chen G, Dresselhaus M, Ren Z. Nanocomposites with high thermoelectric figures of merit. US8293168, 2012.
2. Kuroda N, Wakejima A, Tanomura M, Miyamoto H. Semiconductor device and heat sink with 3-dimensional thermal conductivity. US8476756, 2013.
3. Minoru M, Tokuyuki K, Hiroyuki Y, Akira T. Composition For High Thermal Conductivity Film-Like Adhesive, High Thermal Conductivity Film-Like Adhesive, and Semiconductor Package And Method For Manufacturing The Same Using The Adhesive. JP2012207222A2, 2012.
4. Masaki G, Tetsuo I, Teiichi I, Yoshitaka T. High Thermal Conductivity Resin Composition, High Thermal Conductivity Cured Product, Adhesive Film, Sealing Film, And Semiconductor Device Using Them. JP2013006893A2, 2013.

BOILING HEAT TRANSFER

1. Kazuaki S, Shigemasa S, Akio I. Boiling Refrigerant Type Cooling System. US20120312504A1, 2012.
2. Tetsuya Y, Hideo A. X-Ray Tube Device. JP2013016282A2, 2013.

3. H. Lynn T, William M, William S, Tsungani R. Process for increasing the efficiency of heat removal from a Fischer-Tropsch slurry reactor. US8318102, 2012.
4. Kevin D, Ratnesh Kumar S, Lynn S, Sergio E-V, Anna F. Depositing carbon nanotubes onto substrate. US8323439, 2012.

NANOPARTICLE CONCENTRATION

1. Gavin H. Copolymer nanocomposites. EP2581405A1, 2013.
2. Jesus Manuel P, Atul A, Sudip N. Synthesis of polymer coated ceria nanoparticles for biomedical applications. US8333993, 2012.
3. Shimon M, Terry M F. Capped particles comprising multi-block copolymers for use in lubricants. US8153257, 2012.
4. Dale A M, Andrew M H. Nanofluids for Thermal Management Systems. US20120006509A1, 2012.

DROPLET SPREADING

1. Helen L G, Iain A M, Sarah O, Geraldine D. Polymer compositions. US8481640, 2013.
2. Hisanori M, Noboru A. Circuit Substrate. JP2012121322A2, 2012.
3. Jie Z, Jiun-Der Y. Finite difference algorithm for solving slender droplet evaporation with moving contact lines. US8285526, 2012.
4. Vijay S, Vamsee K P, Michael G P. PCB droplet actuator fabrication. US8268246, 2012.

ENHANCEMENT

1. Fedor V K, Intracavity frequency conversion of laser radiation. US8315284, 2012.
2. Anthony Italo P. Enhancement of visual perception IV. US8531507, 2013.
3. Cristian M H, Davis Y P. Vehicle engine sound enhancement. US8320581, 2012.
4. Phil A H, Xueman L. Spectro-temporal varying approach for speech enhancement. US8352257, 2013.

AGGREGATION

1. Sophia B. Pyroprocessed aggregates comprising IBA and low calcium silicoaluminous materials and methods for producing such aggregates. US8349070, 2013.
2. Carolina M R, Gereon V, Roland P. Multi-source encoded x-ray imaging. US8320519, 2012.
3. Gil L, Peng L, Mark P, Gemma C. Magnetic Bead Aggregation Assay System and Method For Analysing and Characterising Magnetic Bead Aggregation and Detection of Target Analytes. WO2013004852A2, 2013.

4. Stéphane B, Mohsen E, Nicolas R, Emmanuel V, Hassan B, Philippe T. Process for the production of a bituminous composition. US8304475, 2012.

BROWNIAN MOTION

1. Lee E. Kinetic Energy Atom-Powered Engine. WO2013095955A1, 2013.
2. Jeffrey P F, Scott E F, Daniel S. Dynamic Motion Contrast and Transverse Flow Estimation Using Optical Coherence Tomography. US20120004562A1, 2012.
3. Arjun G Y, Joel H G, Guoqiang Y and *et al.* Optical measurement of tissue blood flow, hemodynamics and oxygenation. US8082015, 2011.
4. Toshihito K. Biomolecule Detection Device and Biomolecule Detection Method. JP2012093338A2, 2012.

RUTHENIUM

1. Dong L, Deposition of ruthenium or ruthenium dioxide. US8329569, 2012.
2. Ezat K, Alan M K, Zhanru Y, David M H, Lois H. Olefin metathesis polymerization. US8338550, 2012.
3. Zheng-Yun James Z. Recyclable ruthenium catalysts for metathesis reactions. US8288576, 2012.
4. Hoon K, Sang Hyeob L, Wei Ti L, Seshadri G, Hyoung-Chan HA, Sang Ho Y. Chemical Vapor Deposition (Cvd) Of Ruthenium Films And Applications For Same. WO2013086087A1, 2013.

PALLADIUM

1. Patricia C, Allen Capron S, Concett L. Catalytic Hydrogenation of Fluoroolefins, Alpha-Alumina Supported Palladium Compositions and their Use as Hydrogenation Catalysts. WO2013158848A3, 2013.
2. Mitsuo T, Tsutomu Y, Hiroyuki S, Takashi K, Junichi O, Shigeru S. Pd-Coated Copper Ball Bonding Wire. WO2013094482A1, 2013.
3. Minhua S. Surfactant Removal From Palladium Nanoparticles. WO2012169992A1, 2012.
4. Sergey Alexeevich K, Alexander Konstantinovich N. Palladium-Based Alloy And Method For Hardening Palladium Alloys Used For The Manufacture of Items of Jewellery. WO2013085420A1, 2013.

SUPPORTED NANOPARTICLES

1. Zhenhua Z, Zhihua W, Bing Z. Supported nanoparticle catalysts manufactured using caged catalyst atoms. US7935652, 2011.
2. Priya S, Wayne Kevin J, Stuart Arthur B, Philip Stephen C, Dominic Richard H. Transparent Infrared Absorbing Materials. WO2012103578A1, 2012.

3. Angela M B, Chuanbin M, Daniel J S. Inorganic nanowires. US7923109, 2011.
4. Roger A G, Robert N C, Bi L-K. Direct epoxidation catalyst and process. US20110152550A1, 2011.

ALCOHOL OXIDATION

1. Luiz Carlos A O, Adilson C S, Patterson P S, Nathalia T C. Amphiphilic Catalysts Based On Modified Niobium Compounds, Preparation And Use In Oxidation Reactions. WO2013142937A1, 2013.
2. Lothar Alexander E, Roedolph V B. Multipurpose additive for low VOC solvent based coatings. US8486187, 2013.
3. Kazuhisa M, Kouji M, Takahiro T. Control Device for Internal Combustion Engine. WO2013030926A1, 2013.
4. Francesc G. Structured Aqueous Surfactant Systems. WO2012139818A1, 2012.

CROSS-COUPLING REACTION

1. Martin D B, David M K, Gillis, Eric P G. Slow release of organoboronic acids in cross-coupling reactions. US8338601, 2012.
2. Neil K G, Kyle W Q, Xia T. Cross-coupling of phenolic derivatives. US8546607, 2013.
3. Martin B, David L, Boris M. Pyridin-3-yl derivatives as immunomodulating agents. US8288554, 2012.
4. Martin D B, Eric P G. System for controlling the reactivity of boronic acids. US8318983, 2012.

HYDROGENATION

1. Tim B, Julia B, Giovanni D, Klemens M, Stephan F, Veit S. Enzymatic hydrolysis of a cellulose material treated with an ionic liquid. US8486669, 2013.
2. Herbert Friedrich B, Hans-Peter L, Josef S, Elena P. Organometallic complexes which emit in the red to green spectral region and their use in OLEDs. US8455112, 2013.
3. Rodney A, Andrew W, Vincent W, David B B. Process and apparatus for the production of hydrocarbon compounds from methane. US8455555, 2013.
4. Elaine S E S, Darren M, Laurent F A H, Patrick P. Quinazoline derivatives as angiogenesis inhibitors. US8492560, 2013.

HETEROGENEOUS CATALYSIS

1. Flavie S, Kévin O. Solid/Liquid Heterogeneous Catalysis in a Millifluidic or Microfluidic Medium. WO2013004509A1, 2013.
2. John L B III. Composition for treating a fluid. US8349764, 2013.