

---

## BIBLIOGRAPHY

- Ailan Qu, Xiufang Wen, Pihui Pi, Jiang Cheng, Zhuoru Yang; (2007); Preparation of hybrid film with superhydrophobic surfaces based on irregularly structure by emulsion polymerization; *Applied Surface Science*; Vol .253, 9430-9434
- Akira Nakajima; (2011), Control of static and dynamic hydrophobicity of solid surface and its application; *Journal of ceramic society of Japan*, 119 (10), 711-719
- Akira Nakajima; (2011); Design of hydrophobic surfaces for liquid droplet control; *NPG Asia Materials*; Vol.3, 49 – 56
- Anand Ganesh.V, Hemant Kumar Raut, Sreekumaran Nair.A, Seeram Ramakrishna; (2011); A review on self-cleaning coatings; *Journal of Materials Chemistry*; Vol.21, 16304-16322
- Ananth.A, Arthanareeswaran.G, Huating Wang; (2012); The influence of tetraethylorthosilicate and polyethyleneimine on the performance of polyethersulfone membranes; *Desalination*; 287, 61-70.
- Annaso B. Gurav, Qingfeng Xu, Sanjay S.Latthe, R.S. Vhatkar, Shanhu Liu, Hyun Yoon, Sam S.Yoon; (2015); Superhydrophobic coatings prepared from methyl-modified silica particles using simple dip-coating method; *Ceramics International*; Vol. 41, 3017-3023
- Antony R West; (2014) Solid state chemistry and its applications; *John Wiley & Sons*; 2<sup>nd</sup> Edition, 32-36.
- Arkles.B; (2004); Silanes and other Coupling Agents edited by Kash L. Mittal; CRC Press (Taylor and Francis group); Vol-3; 179-192

- Athanasios Milionis, Eric Lofth, Ilker S.Bayer; (2016); Recent advances in the mechanical durability of superhydrophobic materials; *Advances in Colloid and Interface Science*; Vol 229, 57-79
- Azadeh Tadjarodi, Marzieh Haghverdi, Vahid Mohammadi, Masoud Rajabi; (2013); Synthesis and Characterization of Hydrophobic silica aerogel by two step (Acid-Base) sol-gel process; *Journal of Nanostructures*; Vol.3, 181-189
- Barthlott W, Neinhuis C; (1997), Purity of the sacred lotus, or escape from contamination in biological surfaces; *Planta*; 202, 1-8
- Bashir Ahmed, S.K.Raghuvanshi, Siddhartha, N.P.Sharma, J.B.M.Krishna, M.A.Wahab ; (2013); 1.25 Mev Gamma Irradiated Induced Physical and Chemical changes in Poly Vinylidene Fluoride (PVDF) Polymer ; *Progress in Nanotechnology and Nanomaterials* ; Vol 2, Issue 2, 42- 46
- Beganskiene.A, Sakirzanovas.S, Kazodojev.I, Melninkaitis.A, Sirutkaitis.V, Kareiva.A; (2007); Sol-gel derived antireflective coating with controlled thickness and reflective index; *Materials science- Poland*; 25 (3), 817 – 824
- Bharathi Bai J. Basu, Ashok Kumar Paranthaman; (2009); A simple method for the preparation of superhydrophobic PVDF-HMFS hybrid composite coatings; *Applied Surface Science*; Vol.255, 4479 – 4483
- Bi Xu, Jingjing Ge, and Zaisheng Cai; (2014); One-step processing to fabricate highly transparent superhydrophobic surface via granular silica aerogels; *Advanced Materials Research*; Vol.936, 1042-1046
- Calcum J.Drummond and Derek Y.C.Chan; (1997), Van der Waals Interaction, Surface Free Energies, and Contact Angles: Dispersive Polymers and Liquids; *Langmuir*, Vol 13, 3890-3895
- Cassie.A.B.D, Baxter.S; (1944), Wettability of Porous surfaces; *Transactions of the Faraday Society*; 40, 546-551

- Changhong Su; **(2009)**; Highly hydrophobic and oleophilic foam for selective absorption; *Applied Surface Science*; Vol.256, 1413-1418
- Chao-Ching, Chang Yu-Ting Wu, Liao-Ping Cheng; **(2016)**; Preparation of HMDS-modified silica/polyacrylate hydrophobic hard coatings on PMMA substrates; *Journal of Coating Technology and Research*; Vol. 13 (6), 999-1007
- Chaoyou Tao, Hongwei Yan, Xiaodong Yuan, Qiang Yin, Jiayi Zhu, Wei Ni, Lianghong Yan, Lin Zhang; **(2016)**; Sol-gel based antireflective coatings with superhydrophobicity and exceptionally low refractive indices built from trimethylsilylated hollow silica nanoparticles; *Colloids and Surfaces A: Physicochemical and Engineering Aspects*; Vol.509, Pg.307-313
- Charles E Carraher ; **(2003)**; *Polymer Chemistry*; Marcel Dekker Inc; Library of congress Publications;36 - 104
- Cheng Piao, Jerrold E. Winandly, Todd F. Shupe, **(2011)**, From Hydrophilicity to Hydrophobicity: A critical review: Part I. Wettability and Surface behavior, *Wood and Fiber Science*, 42(4), 490-510
- Chengyu Wang, Cheng Piao, Cran Lucas; **(2011)**, Synthesis and Characterization of Superhydrophobic Wood Surfaces; *Journal of Applied Polymer Science*;119, 1667-1672
- Chien-Hung Chen, Shiao-Yi Li, Anthony S.T.Chiang, Albert T. Wu, Y.S. Sun; **(2011)**; Scratch-resistant zeolite anti-reflective coating on glass for solar applications; *Solar Energy Materials and Solar cells*; Vol. 95, 1694 – 1700
- Chun Yat Lau, Thach Vuong, Jingming Wang, Murat Muradoglu, Oi Wah Liew, Tuck Wah Na; **(2014)**; Hydrophobic to superhydrophobic surface modification using impacting particulate sprays; *Applied Surface Science*; Vol.311, 89-94
- Chun-Wei Yao, Chen-Ling Lai, Jorge L.Alvarado, Jiang Zhou, Kendrick T.Aung, Jose E. Mejia; **(2017)**; Experimental study on effect of surface vibration on micro textured

- surfaces with hydrophobic and hydrophilic materials; *Applied Surface Science*; Vol.412, 45-51
- Cristian Petcu, Cristina Lavinia Nistor, Violeta Purcar, Ludmila Otilia Cinteza, Catalin-Illie Spataru, Marius Ghiurea, Raluca Ianchis, Mihai Anastasescu, Mihai Stoica; **(2015)**; Facile preparation in two steps of highly hydrophobic coatings on polypropylene surface; *Applied Surface Science*; Vol. 347, 359-367
  - Divya Kumar, Xinghua Wu, Qitao Fu, Jeffrey Weng Chye Ho, Pushkar D. Kanhere, Lin Li, Zhong Chen; **(2015)**; Hydrophobic sol-gel coatings based on polydimethylsiloxane for self-cleaning applications; *Materials and Design*; Vol. 86, 855-862
  - Divya Kumar, Xinghua Wu, Qitao Fu, Jeffrey Weng Chye Ho, Pushkar D. Kanhere, Lin Li, Zhong Chen; **(2015)**; Development of durable self-cleaning coatings using organic-inorganic hybrid sol-gel; *Applied Surface Science*; Vol.344, 205-212
  - Dler Adil Jameel; **(2005)**; Thin film Deposition Processes, *International Journal of Modern Physics and Applications*, Vol.1 (4), 193-199
  - Elena Celia, Thierry Darmanin, Elisabeth Taffin de Givenchy, Sonia Amigoni, Frederic Guittard; **(2013)**; Recent advances in designing superhydrophobic surfaces; *Journal of Colloid and Interface Science*; Vol.402, 1-18
  - Fang Wang, Xiufang Wang, Anjian Xie, Yuhua Shen, Wei Duan, Ye Zhang, Jialin Li; **(2012)**; A simple method for preparation of transparent hydrophobic silica-based coatings on different substrates; *Applied Physics A Materials Science and Processing*; Vol.106, 229-235
  - Feng Zhang, Zhenwu Shi, Yingjie Jiang, Chengyun Xu, Zhuhui Wu, Yanyan Wang, Changsi Peng; **(2017)**; Fabrication of transparent superhydrophobic glass with fibered- silica network; *Applied Surface Science*; Vol. 407, 526-531
  - Fred W Billmeyer; **(2007)**, *Textbook of Polymer Science*; *John Wiley and Sons*; 124-136
  - Gaurav Mago, Dilhan M.Kalyon and Frank T.Fisher ; **(2008)**; Membranes of

Polyvinylidene Fluoride and PVDF Nanocomposites with Carbon Nanotubes via Immersion Precipitation ; Journal of Nanomaterials ; Hindawi Publication Corporation ; Vol.2008, 1-8

- Gizem Gezer.P, Serena Brodsky, Austin Hsia, G.Logan Liu, Jozef L.Kokini; **(2015)**; Modification of the hydrophilic/hydrophobic characteristic of Zein film surfaces by contact with oxygen plasma treated PDMS and oleic acid content; *Colloids and Surfaces B : Biointerfaces*; Vol 135,433-440
- Gohil.S.V, Suhail.S, Rose.J, Vella.T and Nair.L.S; **(2017)**; Polymers and Composites for Orthopedic applications; *Materials and Devices for Bone disorder*, 349-395
- Golrokh Heydari, Esben Thormann, Mikael Jarn, Eric Tyrode, and Per M. Claesson; **(2013)**; Hydrophobic Surfaces : Topography effects on wettability by Supercooled water and Freezing delay; *The Journal of Physical chemistry C*; Vol. 117, 21752-21762
- Goswami.A; **(2003)**, Thin film Fundamentals; *New Age International*; 2<sup>nd</sup> Edition, 1-27
- Groza.A and Surmeian.A; **(2015)**; Characterization of the oxides present in a Polydimethylsiloxane layer obtained by polymerization of its liquid precursor in corona discharge; *Journal of Nanomaterials*; Vol.2015; 1-8 [7]
- Gu.G, Dang.H, Zhang.Z, Wu.Z; **(2006)**, Fabrication and characterization of transparent superhydrophobic thin films based on silica nanoparticles; *Journal of Applied Physics A*; 83, 131-132
- Guozhong Cao; **(2004)**, Textbook of Nanostructures and Nanomaterials : Synthesis, Properties and Applications; *Imperial College Press (London)*, 189-197
- Haiming Huang, Weiliang Wang and Liming Wang; **(2019)**; Theoretical assessment of wettability on silane coatings: from hydrophilic to hydrophobic; *Physical Chemistry Chemical Physics*, Vol 21, 8257- 8263
- Haiping Ye, Xinxiang Zhang, Yulu Zhang, Longqiang Ye, BoXiao, Haibing Lv, Bo Jiang; **(2011)**; Preparation of antireflective coatings with high transmittance and enhanced

- abrasion-resistance by a base/acid two-step catalyzed sol-gel process; *Solar Energy Materials and Solar Cells*; Vol.95, 2347 – 2351
- Hamaker.H.C, **(1936)**, A general theory of lyophobic colloids, *Rec Trav.Chim*, 55, 1015-1026
  - Hamelmann.F , Heinzmann.U , Szekeres.A , Kirov.N , Nikolova.T ; **(2005)**; Deposition of Silicon Oxide thin films in TEOS with addition of Oxygen to the Plasma ambient: IR spectra analysis ; *Journal of Optoelectronics and Advanced Materials*; Vol. 7, No. 1, 389 – 392
  - Hannu Teisala, Mikko Tuominen and Jurkka Kuusipalo; **(2014)**; Superhydrophobic coatings on cellulose-based materials: Fabrication, Properties and Applications; *Advanced Materials Interfaces*; Vol. 1300026 (1), 1-20
  - Hao Yang, Pihui Pi, Zhi-Qi Cai, Xiufang Wen, Xibo Wang, Jiang Cheng, Zhuo-ru Yang; **(2010)**; Facile preparation of super-hydrophobic and super-oleophilic silica film on stainless steel mesh via sol-gel process; *Applied Surface Science*; Vol.256, 4095-4102
  - Haolong Bai, Xuan Wang, Yitong Zhou, Liping Zhang ; **(2012)**; Preparation and characterization of Poly(vinylidene fluoride) composite membranes blended with nanocrystalline cellulose ; *Progress in Natural Science: Materials International* ; Vol.22, Issue 3, 250-257
  - Harinarayanan Puliyalil, Gregor Filipic and Uros Cvelbar, **(2015)**, Recent Advances in the Methods for Designing Superhydrophobic surfaces, *Intech*, 311-328
  - Hasan H. Ipekci, H. Harun Arkaz, M.Serdar Onses, Mehmet Hancer; **(2016)**; Superhydrophobic coatings with improved mechanical robustness based on polymer brushes; *Surface and Coatings Technology*; Vol. 299,162-168
  - Helyati Abu Hassan Shaari, Normasyitah Johar, Norzurain Mukhsin, Wan Izhan, Nawawi Wan Ismail; **(2018)**, Synthesis and Characterization of PS-b-PDMS Block Copolymer; *AIP Conference Proceedings*; Vol.2031, 020006-1 – 020006-6

- Hemant Kumar Raut, A. Sreekumaran Nair, Saman Safari Dinachali, V. Anand Ganesh, Timothy Michael Walsh, Sreeram Ramakrishna; (2013); Porous SiO<sub>2</sub> anti-reflective coatings on large-area substrates by electrospinning and their application to solar modules; *Solar Energy Materials and Solar Cells*; Vol.111, 9-15
- Hew-Der Wu, Shoei-Chin Wu, I-Der Wu, Feng-Chih Chang; (2001); Novel determination of the crystallinity of syndiotactic polystyrene using FTIR spectrum, *Polymer*, Vol.42, 4719- 4725
- Hiu Liu, Jianying Huang, Zhong Chen, Guoqiang Chen, Ke-Qin Zhang, Salem S. Al-Deyab, Yuekun Lai; (2017); Robust translucent superhydrophobic PDMS/PMMA film by facile one-step spray for self-cleaning and efficient emulsion separation; *Chemical Engineering Journal*; Vol.330, 124-128
- Hossein Mahdavi, Akram Rahimi, Leila Ahmaadian Alam; (2017), Preparation, characterization and performance study of modified PVDF- based membranes containing palladium nanoparticles-modified graphene hierarchical nanostructures: as a new catalytic nanocomposite membrane; *Polymer Bulletin*; Vol.74, 3557-3577
- Hua Zhou, Hongxia Wang, Haitao Niu and Tong Lin; (2018); Recent Progress in Durable and Self-Healing Super-Nonwetable Fabrics; *Advanced Materials and Interfaces*; 1800461, 1-24.
- Hua Zhou, Hongxia Wang, Haitao Niu, Tong Lin; (2018); Recent progress in Durable and Self-Healing Super-Nonwetable Fabrics; *Advanced Materials Interfaces*; Vol. 18000461, 1-24
- Hualin Chen, Xiaobo Deng, Xiaohui Hou, Rong Luo and Bailing Liu; (2009), Preparation and Characterization of PDMS-PMMA Interpenetrating polymer networks with indistinct phase separation; *Journal of Macromolecular Science –Part A Pure and Applied Chemistry*; Vol.46; 83-89

- Hui Liu, Shou-Wei Gao, Jing-Sheng Cai, Cheng-Lin He, Jia-Jun Mao, Tian-Xue Zhu, Zhong Chen, Jian-Ying Huang, Kai Meng, Ke-Qin Zhang, Salem S.Al-Deyab and Yue-Kun Lai; (2016); Recent Progress in Fabrication and Applications of Superhydrophobic Coating on Cellulose-Based Substrates; *Materials*, Vol 9 (124), 1-37
- Hui Tian, Taisheng Yang, Yuqing Chen; (2009); Fabrication and Characterization of superhydrophobic thin films based on TEOS/RF hybrid; *Applied Surface Science*, Vol.255, 4289-4292.
- Insung Hwang, Inyoung Jeong, Jinwoo Lee, Min Jae Ko and Kijung Yong; (2015); Enhancing stability of Perovskite Solar cells to moisture by the facile Hydrophobic passivation; *ACS Applied Materials and Interfaces*; Vol 7, 17330 – 17336
- Jaroslaw Drelich, Emil Chibowski, Dennis Desheng Meng, and Konrad Terpilowski; (2011), Hydrophilic and Superhydrophilic Surfaces and Materials; *Soft Matter*, 7 (21), 9804-9828
- Jaspreet Singh, Kulwinder Singh and Jaswinder S Saini; (2018); Processing of polymers and their composites:a review; *Reference Module in Materials Science and Materials Engineering* ; 1-27
- Javid Rzayev; (2009); Synthesis of Polystyrene- Polylactide bottlebrush block copolymers and their melt self-assembly into large domain nanostructures; *Macromolecules*, Vol. 42, 2135-2141
- Jian-Hua Li, Xi-Sheng Shao, Qing Zhou, Mi-Zi Li, Qi-Qing Zhang; (2013); The double effects of silver nanoparticles on the PVDF membrane : Surface hydrophilicity and anti-fouling performance; *Applied Surface Science*; Vol.265, 663-670
- Jie Ju, Xi Yao, Xu Hou, Qihan Liu, Yu Shrike Zhang, and Ali Khademhosseini; (2017); A Highly stretchable and Robust Non-fluorinated Superhydrophobic Surface; *Journal of Materials Chemistry A*; Vol.5 , 16273-16280

- John T Simpson, Scott R Hunter, and Tolga Aytug; (2015); Superhydrophobic materials and coatings : a review; *Reports on progress in Physics*; Vol.78,1-15
- Jyoti L. Gurav, In-Keun Jung, Hyung-Ho Park, Eul Son Kang and Digambar Y. Nadargi; (2010); Silica Aerogel: Synthesis and Applications; *Journal of Nanomaterials*; Vol. 2010, 1-11
- Karsten H. Nielsen, Dominik K. Orzol, Svetoslav Koynov, Steve Carney, Eric Hultstein, Lothar Wondraczek; (2014); Large area, low cost anti-reflective coating for solar glasses; *Solar Energy Materials and Solar Cells*; Vol.128, 283-288
- Kerstin Weissenbach and Helmut Mack; (2005); Silane Coupling Agents; *Functional Fillers for Plastics*; 59-83
- Kumar.V, Pallapa.M and Rezai P, Selvaganapathy P R; (2016); Polymers; *Reference Module in Materials Science and Materials Engineering*; 1-62
- Kunst.S.R, Cardoso.H.R.P, Oliveira.C.T, Santana.J.A, Sarmento.V.H.V, Muller.I.L, Malfatti.C.F; (2014); Corrosion resistance of siloxane-poly(methyl methacrylate) hybrid films modified with acetic acid on tin plate substrates : Influence of tetraethoxysilane addition; *Applied Surface Science*; Vol. 298, 1-11
- Leila Shams Solaree, Ahmad Monshi, and Hamid Ghayour; (2015); A new approach for the fabrication of hydrophobic silica coatings on glass using sol-gel method; *Synthesis and reactivity in Inorganic, Metal-organic, and Nano-organic Chemistry*; Vol.45, 1769-1772
- Leon I. Maissel, Maurice H. Francombe; (1984), An Introduction to Thin films; Gordon and Breach Science Publishers; 3<sup>rd</sup> Edition, 56-58
- Lianghong Yan, Haibing Lv, Cheng cheng Wang, Xiaodong Yuan; (2011); Hydro-oleophobic silica antireflective films with high laser-damage threshold; *Optics and Laser Technology*; Vol. 43, 232-236

- Lin Feng, Shuhong Li, Yingshun Li, Huanjun Li, Lingjuan Zhang, Lei jiang. (2002); Super-Hydrophobic Surfaces: From Natural to Artificial, *Advanced Materials*,14(24),1857-1860.
- Maedeh Ramezani, Mohammad Reza Vaezi, Asghar Kazemzadeh; (2015); Study of the water repellency of the modified silica films using different organoalkoxysilanes; *Applied Physics A Materials Science and Processing*; Vol. 119, 845-852
- Mahadik.D.B, Hae-Noo-Ree Jung, Yoon Kwang Lee, Kyu-Yeon Lee and Hyung-Ho Park; (2016); Elastic and Superhydrophobic Monolithic Methyltrimethoxysilane-based Silica Aerogels by Two-step Sol-gel process; *Journal of Microelectronics and Packaging Society*; Vol. 23 (1), 35-39
- Mahendra S.Kavale, D.B. Mahadik, V.G. Parale, P.B.Wagh, Satish C.Gupta, A.Venkateswara Rao, Harish C.Barshilia; (2011); Optically transparent, superhydrophobic methyltrimethoxysilane based silica coatings without silylating reagent; *Applied Surface Science*; Vol.258, 158-162
- Mariateresa Lettieri , Maurizio Masieri , Alessandra Morelli , Mariachiara Pipoli and Mariaenrica Frigione; (2018); Oleo/Hydrophobic coatings containing nano-particles for the protection of stone materials having different porosity; *Coatings*; Vol.8, 429-(1-17)
- Marielen Longhi, Sandra Raquel Kunsta, Lilian Vanessa Rossa Beltrami, Estela Knopp Kerstner, Cicero Inacio Silva Filho, Victor Hugo Vitorino Sarmiento, Celia Malfatti; (2015); Effect of Tetraethoxy-silane (TEOS) amounts on the corrosion prevention properties of Siloxane-PMMA hybrid coatings on Galvanized steel substrates, *Materials Research*, 18(6),1140-1155
- Mas Rosemal H.Mas Haris, S.Kathiresan, S.Mohan ; (2010); FT-IR and FT-Raman Spectra and Normal Coordinate Analysis of Poly methyl methacrylate; *Der Pharma Chemica*, 2(4): 316-323

- Mehmet Hancer, Harun Arkaz; (2015); A facile fabrication of superhydrophobic nanocomposite coating with contact angles approaching the theoretical limit; *Applied Surface Science*; Vol.354, 342-346
- Mesut Akgun, Sennur Deniz, Nil Baran, Nimet I Uzun, Nalan A Akgun and Salih Dincer; (2005); Synthesis of Polydimethylsiloxane-block-polystyrene-block-polydimethylsiloxane via polysiloxane-based macroinitiator in supercritical CO<sub>2</sub>; *Polymer International*; Vol.54, 374-380
- Michael Nosonovsky, Bharat Bhushan; (2009); Superhydrophobic surfaces and emerging applications: Non-adhesion, energy, green engineering; *Current Opinion in Colloid and Interface Science*; Vol. 14, 270-280
- Minglin Ma and Randal M Hill; (2006) Superhydrophobic Surfaces; *Current Opinion in Colloid and Interface Science*; 11,193-202.
- Nan Wang, Yao Lu, Dangsheng Xiong, Claire J. Carmalt, and Ivan P.Parkin; (2016); Designing durable and flexible superhydrophobic coatings and its application in oil purification; *Journal of Materials Chemistry A*; Vol 4, 4107 – 4116
- Naveen Kumar.K and Srinivasa Buddhudu; (2012) , Studies on Structural, Thermal, Optical and Electrical properties of PEO+PVP Polymer Films with and Without Li<sup>+</sup> and Ag<sup>+</sup>, *Indian Journal of Physics*, Vol 5, 159-172.
- Neil J. Shirtcliffe, Glen McHale, Michael I. Newton, Carole C.Perry, Paul Roach; (2007); Superhydrophobic to superhydrophilic transitions of sol-gel films for temperature, alcohol or surfactant measurement; *Materials Chemistry and Physics*; Vol.103, 112-117
- Neinhuis C, Barthlott W; (1997), Characterization and Distribution of Water-repellent, Self-cleaning plant surfaces; *Annals of Botany*; 79, 667-677
- Nidal Wanis Elshereksi, Saied Hamd Mohamed, Azlan Arifin and Zainal Arifin Mohd Ishak; (2014); Thermal Characterisation of Poly (Methyl Methacrylate) filled with Barium Titanate as Denture Base Material; *Journal of Physical Science*; Vol. 25 (2), 15-27

- Nils O. Petersen, (2017), Foundations for Nanoscience and Nanotechnology, *CRC Press-Taylor and Francis*, 152-155.
- Niranjan Sahu, B Parija and S Panigrahi; (2009), Fundamental understanding and modeling of spin coating process : A review; *Indian Journal of Physics*, Vol. 83 (4), 493-502
- No-Kuk Park, Do Hyeong Kim, Min-Jung Kim, Tae Jin Lee, Seung Hyun Lee and Seung Hun Lee; (2013); Synthesis of Macro-porous anti-reflective materials from the TEOS-PS system for a Solar cover glass; *Molecular crystals and Liquid crystals*; Vol.585, 82 – 90
- P.G.De Gennes, F.B.Wyrat, David Quere; (2003); Capillary and Wetting Phenomena; *Springer-Verlag*; 1-15
- Pantoja.M, Encinas.N, Abenojar.J, Martinez.M.A; (2013); Effect of tetraethoxysilane coating on the improvement of plasma treated polypropylene adhesion; *Applied Surface Science*; Vol. 280, 850-857
- Paola Pareo, Gian Luca De Gregorio, Michele Manca, Maria Savina Pianesi, Lunisa De Marco, Francesco Cavallaro, Margherita Mari, Silivio Pappada, Giuseppe Ciccarella, Giuseppe Gigli; (2011); Ultra light weight PMMA-based composite plates with robust super-hydrophobic surfaces; *Journal of Colloid and Interface Science*; Vol. 363, 668-675
- Parale.V.G, Mahadik.D.B, Kavale.M.S, Mahadik.S.A, Venkateswara Rao.A, Steven Mullens; (2013); Sol-gel preparation of PTMS modified hydrophobic and transparent silica coatings; *Journal of Porous Matter*; Vol. 20, 733-739
- Paula Ferreira, Alvaro Carvalho, Tiago Ruivo Correia, Bernardo, Paiva Antunes, Ilidio Joaquim Correia and Patricia Alves; (2013); Functionalization of polydimethylsiloxane membranes to be used in the production of voice prostheses; *Science and Technology of Advanced Materials*; Vol.14; 055006 (1-8)

- Pendse.S, Chandra Sekhar Reddy.K, Narendra.C, Murugan.K, Sakthivel.S; (2018); Dual-functional broadband antireflective and hydrophobic films for solar and optical applications; *Solar Energy*; Vol. 163, 425-433
- Piotr Galka, Jolanta Kowalonek, Halina Kaczmarek; (2014); Thermogravimetric analysis of thermal stability of Poly(methyl methacrylate) films modified with photoinitiators; *Journal of Thermal Analysis and Calorimetry*; Vol.115, 1387-1394
- Popat G. Pawar, Ruimin Xing, Rahul C. Kambale, A.Madhan Kumar, Shanhu Liu, Sanjay S. Latthe; (2017); Polystyrene assisted superhydrophobic silica coatings with surface protection and self-cleaning approach; *Progress in Organic Coatings*; Vol.105, 235-244
- Prathapan Ragesh Prathapan Ragesh, V. Anand Ganesh, Shantikumar V, Nair and A. Sreekumaran Nair, (2014); A review on 'self-cleaning and multifunctional materials', *Journal of Material Chemistry A*, 2, 14773-14797.
- Qian Feng Xu, Jian Nong Wang; (2009); A superhydrophobic coating on aluminium foil with an anti-corrosive property; *New Journal of Chemistry*; Vol.33, 734 – 738
- Qianqian Li, Yuheng Yan, Miao Yu, Botao Song, Suqing Shi, Yongkuan Gong; Synthesis of polymeric fluorinated sol-gel precursor for fabrication of superhydrophobic coating; *Applied Surface Science*; Vol. 367, Pg. 101-108 (2016)
- Qingjun Wang, Zhe Cui, Yi Xiao, Qingmin Chen; Stable highly hydrophobic and oleophilic meshes for oil-water separation; *Applied Surface Science*; Vol.253, Pg. 9054-9060 (2007)
- Qingshan Lu , Zhongying Wang, Peiyu Wang and Jiangong Li; (2010);Structure and Luminescence properties of Eu<sup>3+</sup>doped cubic mesoporous silica thin films; *Nanoscale Research Letters*; Vol.5, 761-768
- Rasoul Moradi, Javad Karimi-Sabet, Mojtaba Shariaty-Niassar and Mohammad A.Koochaki; (2015); Preparation and Characterization of Polyvinylidene Fluoride/Graphene Superhydrophobic Fibrous films; *Polymers*; Vol.7, 1444-1463

- Robert N. Wenzel; (1936), Resistance of Solid surfaces to wetting by water, *Industrial and Engineering Chemistry*; 28 (8), 988-994
- Robin H A Ras, Abraham Marmur; (2017); Non-wettable Surfaces Theory, Preparation and Applications; *RSC Soft Matter Series*; 5,1-72
- Rosa Taurino, Elena Fabbri, Massimo Messori, Francesco Pilati, Doris Pospiech, Alla Synytska; (2008) ;Facile preparation of superhydrophobic coatings by sol-gel processes; *Journal of Colloid and Interface science*; Vol.325, 149-156
- Sa-Kyun Rha, Tammy P.Chou, Guozhong Cao, Youn-Seoung Lee, Won-Jun Lee; (2009); Characteristics of silicon oxide thin films prepared by sol electrophoretic deposition method using tetraethylorthosilicate; *Current Applied Physics*; Vol.9 , 551-555
- Sandra Raquel Kunst, Henrique Ribeiro Piaggio Cardoso, Claudia Trindade Oliveira, Cicero Inacio da Silva Filho, Victor Hugo Vitorino Sarmento, Tiago Lemos Menezes, Iduvirges Lourdes Muller, Cella da Fraga Malfatti; (2013); Influence of Tetraethoxysilane addition in siloxane-Poly (methyl methacrylate) hybrid films applied on galvanized steel; *International Journal of Electrochemical Science*; Vol. 8, 11984-12004
- Sandra Raquel Kunst, Henrique Ribeiro Piaggio Cardoso, Claudia Trindade Oliveria, Cicero Inacio da Silva Filho, Victor Hugo Victorina Sarmento, Tiago Lemos Menezes, Iduvirges Lourdes Muller, Celia de Fraga Malfatti; (2013); Influence of Tetraethoxysilane addition in Siloxane-Poly(Methyl Methacrylate) Hybrid films applied on Galvanized steel, *International Journal of Electrochemical Science*, Vol.8,11984-12004
- Sanjay S Latthe, Rajaram S Sutar, Vishnu S Kodag, A K Bhosale, A Madhan Kumar, Kishor Kumar Sadasivuni, Rumin Xing, Shanhu Liu; (2019); Self-cleaning superhydrophobic coatings: Potential industrial applications; *Progress in Organic Coatings*, Vol.128; Pp.52-58

- Sanjay S. Latthe, Hiroaki Imai, V.Ganesan, A.Venkateswara Rao; (2010); Porous superhydrophobic silica films by sol-gel process; *Microporous and Mesoporous Materials*; Vol.130,115-121
- Sanjay Subhash Latthe, Annaso Basavraj Gurav, Chavan Shridhar Maruti, Rajiv Shrikant Vhatkar ; (2012); Recent progress in Preparation of Superhydrophobic surfaces : A Review; *Journal of Surface Engineered Materials and Advanced Technology*; Vol 2, 76-94
- Sarah B. Ulaeto, Ramya Rajan, Jerin K. Pancreicious, Rajan.T.P.D, Pai.B.C; (2017); Developments in smart anticorrosive coatings with multifunctional characteristics; *Progress in Organic Coatings*, Vol. 111, 294-314
- Sathya.S, Sriyutha Murthy.P, Aridam Das, Gomathi Sankar.G, Venkatnarayanan.S, Pandian.R, Sathyaseelan.V.S, Pandiyan.V, Doble.M , Venugopalan.V.P; (2016); Marine antifouling property of PMMA nanocomposite films: Results of laboratory and field assessment; *International Biodeterioration and Biodegradation*; Vol.114, 57-66
- Satish A Mahadik, Vinayak parale, Rajiv S.Vhatkara, Dinesh B.Mahadik, Mahendra S. Kavale, Pratap B.Wagh, Satish Gupta, Jyoti Gurav; (2013); Superhydrophobic silica coating by dip coating method; *Applied Surface Science*; Vol.277, 67-72
- Satvekar.R.K, Phadatare.M.R, Karande.V.A, Patil.R.N, Tiwale.B.M and Pawar.S.H; (2012); Influence of Silane content on the Optical properties of SolGel derived spin coated silica thin films; *International Journal of Basic and Applied Sciences*, Vol.1 (4), 468-476
- Seena Ibrahim, Harith Ibrahim; (2014) Synthesis and characterization of the PMMA/SiO<sub>2</sub> hybrids by sol-gel method; *Chemistry and Materials Research*, Vol.6 (1); 52-61
- Shang.H.M, Wang.Y, Limmer S J, Choru.T.P, Takahashi.K; (2015); Optically transparent superhydrophobic silica-based films; *Thin solid films*;Vol.472, 37-43

- Shanhu Liu, Sanjay S. Latthe, Haitang Yang, Baoshun Liu, Ruimin Xing; (2015); Raspberry-like superhydrophobic silica coatings with self-cleaning properties; *Ceramics International*; Vol. 41, 11719-11725
- Shanhu Liu, Xiaojing Liu, Sanjay S Latthe, Li Gao, Seongpil An, Sam S. Yoon, Baoshun Liu, Ruimin Xing; (2015); Self-cleaning transparent superhydrophobic coatings through simple sol-gel processing of fluoroalkylsilane; *Applied Surface Science*; Vol. 351, 897-903
- Shing – Dar Wang and Ying-Yeh Shu; (2013); Superhydrophobic antireflective coating with high transmittance; *Journal of Coatings Technology and Research*; Vol.10, 527-535
- Shuang Cai, Yulu Zhang, Hongli Zhang, Hongwei Yan, Haibing Lv, and Bo Jiang; (2014); Sol-Gel preparation of Hydrophobic Silica Antireflective coatings with low Refractive index by Base/acid Two-step catalysis; *ACS Applied Materials and Interfaces*; Vol.6,11470-11475
- Silvano Rodrigo Valandro, Patricia Coelho Lombardo, Alessandra Lima Poli, Marco Antonio Horn Jr, Miguel Guillermo Neumann and Carla Cristina Schmitt Cavalheiro; (2014); Thermal Properties of Poly(Methyl Methacrylate)/Organo modified Montmorillonite Nanocomposites Obtained by in situ Photopolymerization; *Materials Research*; Vol. 17 (1), 265-270
- Songnan Zhang, Jianying Huang, Zhong Chen, Shu Yang and Yuekun Lai; (2019); Liquid mobility on superwetable surfaces for applications in energy and the environment; *Journal of Materials Chemistry A*, Vol 7, 38-63
- Soo-Jin Park and Min-Kang Seo; (2011), Solid-Gas Interaction; *Interface Science and Technology*; Vol.18 ; 59-145
- Steele.A, Bayer.I, Loth.E; (2009), Inherently Superoleophobic Nanocomposite coatings by Spray Atomization; *Nano Letters*, 9 (1), 501-505

- Subasri.R, Madhav.C.S, Somaraju.K.R.C, Padmanabham.G; (2012); Decorative, hydrophobic sol-gel coatings densified using near-infrared radiation; *Surface and Coatings Technology*; Vol.206, 2417-2421
- Sun.X, Turnage.S, Iezzi.E.B, Yang.Y, Chang.B, Muthgowda.N.C, Balijepalli.S.K, Nicholas Dhuyvetter, Wang.L.P, Solanki.K.N, Rykaczewski.K; (2017); Water permeation and corrosion resistance of single- and two component hydrophobic polysiloxane barrier coatings; *Journal of Coatings and Technology research*; Vol. 14 (6); 1247-1258
- Sunisa Jindasuwan,Sitthisuntorn Supothina; (2019); Hydrophobic and Oleophilic Filter Paper for Oil/Water Separation; *Key Engineering Materials*, Vol.798, 385-390
- T Young; (1805); An essay on the Cohesion of fluids; *Philosophical Transactions of Royal Society of London*; 95, 65-87
- Thierry Darmanin and Frederic Guittard; (2015), Superhydrophobic and superoleophobic properties in nature; *Materials Today*, 18 (5); 273-285.
- Tim R Dargaville, Mathias C Celina, Julie M Elliott, Pavel M Chaplya,Gary D Jones, Daniel M Mowery, Roger A Assink, Roger L Clough, and Jeffrey W Martin;(2005); Characterization, Performance and Optimization of PVDF as a Piezoelectric Film for advanced spacemirror concepts; *Sandia Report*, 1-49
- Toshiya Wantanbe; (2009); Wettability of ceramic surfaces- A wide range control of surface wettability from superhydrophilicity to superhydrophobicity from static wettability to dynamic wettability; *Journal of ceramic society of Japan*; 117(12), 1285-1292.
- Veronika V.Dick, Peter Klein; (2014); Molecular simulation of the hydrodynamics of water in contact with hydrophilized poly(vinylidene fluoride) surfaces; *Journal of Colloid and interface science*; Vol.432, 70-76
- Vial.J and Carre.A; (1991), Calculation of Hamaker constant and surface energy of polymers by a simple group contribution method; *International Journal of Adhesion and Adhesives*, Vol 11, No. 3 : 140-143

- Vimal K. Tiwari, Yujeong Lee, Giyoung Song, Kang Lib Kim, Youn Jung Park, Cheolmin Park; (2018); Thin Poly(ionic liquid) and Poly(vinylidene fluoride) Blend Films with Ferro- and Piezo- Electric Polar  $\gamma$ - Crystals, *Polymer Science*, 1-8.
- Violeta Purcar, Ioan Stamatina, Otilia Cinteza, Cristian Pectu, Valentin Raditoiu, Marius Ghiurea, Teodora Miclaus, Adriana Andronie; (2012); Fabrication of hydrophobic and antireflective coatings based on hybrid silica films by sol-gel process; *Surface and Coatings Technology*; Vol. 206, 4449-4454
- Violeta Purcar, Simona Caprarescu , Catalin Ilie Spataru, Marius Ghiurae,Valentin Raditoiu, Cristian Petcu, Raluca Somoghi, Mihai Cosmin Corobea and Dan Donescu ; (2013); Preparation of Hydrophobic and anti-reflective hybrid films by Sol-gel process using Perfluoroalkylsilane and Tetraethoxysilane ; *ACADEMIA ROMANA* ; Vol.58, 283-289
- Wei She, Xiaohui Wang, Changwen Miao, Qunchao Zhang, Yunsheng Zhang, Jingxian Yang, Jinxiang Hong; (2018); Biomimetic superhydrophobic surface of concrete : Topographic and chemical modification assembly by direct spray; *Construction and Building Materials*; Vol.181, 347-357
- Xia Zhang, Bei Ding, Ran Cheng, Sebastian C Dixon, and Yao Lu; (2017); Computational Intelligence-Assisted Understanding of Nature-Inspired Superhydrophobic Behavior; *Advanced Science*; Vol.1700520, 1-9
- Xia Zhang, Danfeng Zhi, Lei Sun, Yanbao Zhao, Manish K.Tiwari, Claire J Carmalt, Ivan P Parkin, Yao Lu; (2018); Super-durable, non-fluorinated superhydrophobic free-standing items; *Journal of Materials Chemistry A*; Vol.6, 357-362
- Xia Zhao, Yabin Li, Bucheng Li, Tao Hu, Yanfei Yang, Ling xiao Li, Junping Zhang; (2019); Environmentally benign and durable superhydrophobic coatings based on SiO<sub>2</sub> nanoparticles and silanes; *Journal of Colloid and Interface Science*; Vol.542, 8-14

- Xianghui Xu, ZhaoZhu Zhang, Jin Yang; Study on the superhydrophobic poly(methyl methacrylate)/silver thiolate composite coating with absorption of UVA light; (2010); *Colloids and Surfaces A: Physicochemical and Engineering Aspects*; Vol. 355, 163-166
- Xiaoguang Li, JunShen ; (2011); A scratch-resistant and hydrophobic broadband antireflective coating by sol-gel method; *Thin Solid Films*; Vol. 519, 6236 – 6240
- Xiaojiang Liu, Yan Wang, Zao Chen, Keyang Ben, Zisheng Guan; (2016); A self-modification approach toward transparent superhydrophobic glass for rainproofing and superhydrophobic fiberglass mesh for oil-water separation; *Applied Surface Science*; Vol.360, 789-797
- Xiaoyu Li, Junhui He, Weiyi Liu; (2013); Broadband anti-reflective and water-repellent coatings on glass substrates for self-cleaning photovoltaic cells; *Materials Research Bulletin*; Vol.48, 2522-2528
- Xin Fan, Lianfu Zheng, Jiang Cheng, Shouping Xu, Xiufang Wen, Zhiqi Cai, Pihui Pi, Zhuoru Yang; (2012); Template synthesis of raspberry-like polystyrene/SiO<sub>2</sub> composite microspheres and their application in wettability gradient surfaces; *Surface and Coatings Technology*, Vol 213, 90-97
- Xin Huang, Jing Zhang, Weiping Wang, Yaodong Liu, Zhibing Zhang, Lei Li and Wenling Fan; (2015); Effects of PVDF/SiO<sub>2</sub> hybrid Ultrafiltration membranes by sol-gel method for the concentration of fennel oil in herbal water extract; *RSC Advances*; Vol. 5, 18258 – 18266
- Xin Yang, Liquin Zhu, Yichi Chen, Baiqing Bao, Jinlong Xu, Weiwei Zhou; (2016); Controlled hydrophilic/hydrophobic property of silica films by manipulating the hydrolysis and condensation of tetraethoxysilane; *Applied Surface Science*; Vol. 376, 1-9
- Xinghua Wu, Qitao Fu, Divya Kumar, Jeffrey Weng Chye Ho, Pushkar Kanhere, Huanfu Zhou, Zhong Chen; (2016); Mechanically robust superhydrophobic and

- superoleophobic coatings derived by sol-gel method; *Materials and Design*; Vol. 89, 1302-1309
- Xuejuan Zhao, Jing Cheng, Shuangjuan Chen, Jun Zhang and Xiaolin Wang; (2010); Hydrophilic modification of poly(vinylidene fluoride) (PVDF) by in situ polymerization of methyl methacrylate (MMA) monomer; *Colloid Polymer Science*; Vol.288, 1327 – 1332
  - Yang. S.C; (2006); Effects of surface roughness and interface wettability on nanoscale flow in a nanochannel; *Microfluid Nanofluid*; Vol. 2, 501-511 [14]
  - Ying Ma, Xinyu Cao, Xinjian Feng, Yongmei Ma, Hong Zou ; (2007), Fabrication of super-hydrophobic film from PMMA with intrinsic water contact angle below 90°; *Polymer*, Vol.4; 7455-7460.
  - Zhao-Tong Qu, Shi-Yuan Duan, Bing-Bing Li, De Sun, Yun-Lei Gu; (2018); PDMS/PVDF microporous membrane with semi-interpenetrating polymer networks for vacuum membrane distillation; *Journal of Applied Polymer Science*, Vol.45792; 1 – 10
  - Zhao-Xia Huang, Xiaoxiao Liu, Shing-Chung Wong, Jin-ping Qu; (2017); Electrospinning polyvinylidene fluoride/expanded graphite composite membranes as high efficiency and reusable water harvester; *Materials Letters*; Vol.202, 78-81
  - Zhengqing Yang, Lida Wang, Wen Sun, Sijia Li, Tianzhen Zhu, Wei Liu, Guichang Liu; (2017); Superhydrophobic epoxy coating modified by fluorographene used for anti-corrosion and self-cleaning; *Applied Surface Science*; Vol. 401, 146-155
  - Zhengwei Song , Zhihui Xie, Lifeng Ding , Yike Zhang; (2018); Corrosion resistance of super-hydrophobic coating on AZ31B Mg alloy; *International Journal of Electrochemical science*; Vol.13, 6190-6200
  - Zhengyong Huang, Wenjie Xu, Yu Wang, Haohuan Wang, Ruiqi Zhang, Ximing Song, and Jian Li; (2018); One-step preparation of durable super-hydrophobic MSR/SiO<sub>2</sub> coatings by suspension air spraying; *Micromachines*; Vol.9, 677- (1 – 11)