سوابق علمی و اجرایی

Curriculum Vitae of Mehdi Jonoobi

PERSONAL DETAIL:
Date of Birth: 20/08/1978
Place of birth: Dezfool, Iran
Nationality: Iranian
h-index: 22
i10-index: 30
Citations: 3966
Top 2% of the World's Scientists

EDUCATION:
-B.Sc., (1997-2001), in Cellulose Chemistry, Iran
-M.Sc., (2004-2006), in Composite Technology and Modification, Iran
-Ph.D., (2007-2010), in Bio-Nanocomposite Technology and Modification, UPM University, Malaysia and Lule University of Technology, Sweden
-Post Doc., (2010-2012), in Bio and Nnocomposite and Surface Treatments, Lule. University of Technology, Sweden

WORK EXPERIENCE:
1999- Part-time Working in the Pars Paper Company, Khuzestan, Iran
2003-2005, Manager of Quality Control, Karun Particleboard Company, Khuzestan, Iran
2006, Laminate Line Process of Iran Choob Company, Ghazvin, Iran
2005-2007, Production Manager of Karun Particleboard Company, Khuzestan, Iran
2013-2014, Director of ANG Company (High gloss), Ghom, Iran
2013, Production Manager of Bita Company (PVC Foam), Ghom Iran
2012-Present, Faculty Member of University of Tehran, Iran

TEACHING

Wood Composites; Processing, Properties and Products
Wood Modification
Biocomposite Applications
Adhesives and Adhesion
Nano-materials and Bionanocomposites
Recycling of Biocomposite

STUDENTS SUPERVISOR

Msc Students

Title of Thesis,

1- Optimization of particleboard laminating process using response surface methodology
2- Preparation of moisturizing face mask using cellulose nanofibers
3- Anti fungal properties of nano-crystals of cellulose with and without the presence of nano-chitosan and their impact on reducing the pollution of current notes
4- The possibility of using a new protein-based fat reinforced with cellulose nanocrystal substitute in the formulation of a dietary mayonnaise sauce
5- Nanofiber cellulose membranes for removing water microbial factors
6- Investigation of storage time on color properties and chemical compounds of the particle board made from bagasse
7- Preparation of green composites using polylactic acid and sugarcane bagasse by twin screw extrusion

PhD STUDENTS

Title of Thesis

1- Preparation of nanocellulose-based hydrogel for wound healing and pain relief with antiseptic properties
2- Preparation and characterization of nano-porous membranes by cellulose nanocrystals for water purification
3- Preparation and characterization of air nanofilters using cellulose nanofibers
4- Physico-mechanical and biodegradation properties of nanocomposites made from polyvinyl alcohol and cellulose nanofiber (CNF) by freeze drying method
5- The use of cellulose nanofiber in the purification the smoke from burning tobacco products
6- Cellulose nanofibrils as a reinforcement in scaffolds used for skin tissue engineering in vitro
7- Development and characterization of bio-adhesive from chemically modified soy-protein and nanocellulose
8- Investigation of the physical and mechanical properties of Poplar wood treated with cellulose nanocrystals (CNC)
9- Evaluation antimicrobial properties of chitosan and reinforcing of nanocellulose on Zein composite films

RESEARCH INTERESTS

Biobased Polymers and their Composites
Cellulose Modification
Surface Treatment of Micro and Nanofibers and Fiber-Matrix Adhesion
Extrusion Processing
Foam Products from Polymers, Nanocellulose, and Nanocomposites
Anti-Bacterial Nanocellulose
Industrial Bio-Residue and Waste Disposal
Thermoplastic and Thermoset Nanocomposites
Nanoparticles, Nanofibers and Cellulose Nanocrystals
Technical Characterization (ESEM, AFM, TEM, SEM, X-ray, DSC, TGA, FTIR, CNMR, DMA, Tensile testing, Contact Angle)
Nanocomposites Processing, Properties and Characterization

PUBLICATION:

PAPERS:

1-**Mehdi Jonoobi**, Jalaludin Harun, Alireza Shakeri, Manjusri Misra and Kristiina Oksman. (2009). Chemical composition, crystallinity, and thermal degradation of bleached and unbleached kenaf (Hibiscus cannabinus) pulp and nanofibers, **Bioresources**, 4(2), 626-639

2-**Mehdi Jonoobi**, Jalaluddin Harun, Aji P. Mathew, Mohd Zobir B. Hussein, and Kristiina Oksman. (2009). Preparation of cellulose nanofibers with hydrophobic surface characteristics. **Cellulose**, 17(2), 299-307

3-**Mehdi Jonoobi**, Jalaluddin Harun, Aji P. Mathew, and Kristiina Oksman. (2010). Mechanical properties of cellulose nanofiber (CNF) reinforced polylactic acid (PLA) prepared by twin screw extrusion. **Composite Science and Technology**. 70(12), 1742– 1747

4-Kristiina Oksman, Jackson E. Ayuk, Aji P. Mathew, and **Mehdi Jonoobi**. (2010). Cellulose Nanowhiskers Separated from a Bio-residue from Wood Bioethanol Production. **Biomass and Bioenergy**. 35, 146-152

5-Davoodi M.M, S.M Sapuan, D Ahmad, A Aidy, A Khalina, and **Jonoobi Mehdi**. (2010). Mechanical properties of hybrid kenaf/glass reinforced epoxy composites in passenger car bumper beam. **Materials and Design**, 31, 4927-4932

6-**Mehdi Jonoobi**, Jalaludin Harun, Paridah Md. Tahir, Alireza Shakeri, Syeed SaifulAzry, and Majid Davoodi Makinejad. (2010). Physicochemical characterization of kenaf stem fibers. **Materials Letters**, 65, 1098-1100

7-Davoodi M.M, Sapuan S.M, Ahmad D, Aidy A, Khalina A, and **Jonoobi Mehdi**. (2011), Concept Selection of Car Bumper Beam with Developed Hybrid Bio-Composite Material. **Materials and Design,** 32, 4857-4865

8-**Mehdi Jonoobi**, Jalaludin Harun, Paridah Md. Tahir, Syeed SaifulAzry, Lukmanul Hakim Zaini, and Majid Davoodi Makinejad. (2010). Characteristics of nanofibers extracted from kenaf core, **Bioresources**, 5(4), 2556-2566

9-Alireza Shakeri and **Mehdi Jonobi**. (2011). Water repellent cellulose nanofibers by acetylation. **Advanced Materials Research**, 332-334

10-**Mehdi Jonoobi**, Abolghasem Khazaeian, Paridah Md. Tahir, Syeed Saiful Azry, and Kristiina Oksman. (2011). Characteristics of cellulose nanofibers isolated from rubberwood and empty fruit bunches of oil palm using chemo-mechanical process. **Cellulose**, 18, 1085-1095

11-Davoodi M.M, Sapuan S.M, Ahmad D, Aidy A, Khalina A, and **Jonoobi Mehdi**. (2012), Effect of polybutylene terephthalate (PBT) on impact property improvement of hybrid kenaf/glass epoxy composite. **Materials and Design**, 67, 5-7

12-**Mehdi Jonoobi**, Aji P. Mathew, and Kristiina Oksman. (2009). Produsing low-cost cellulose nanofiber from sludge as new source of raw materials. **Industrial Crop and Products**, 40, 232-238.

13-**Mehdi Jonoobi**, Aji P. Mathew, Mahnaz M. Abdi, Majid Davoodi Makinejad, and Kristiina Oksman. (2012). A comparison of modified and unmodified cellulose nanofiber reinforced polylactic acid (PLA) prepared by twin screw extrusion. **Journal of Polymer and the Environment,** 20, 991-997

14-M.R. Masteri Farhani and **Mehdi Jonoobi**. (2009). Dimensional stability and mechanical properties of particleboard made from propionylated bagasse. **J. Agric. Sci. Natur. Resour** (Iran), 15, 140-150

15-**Mehdi Jonoob**i., A.R. Saraeeyan., and M.R. Masteri Farhani. (2010). Dimensional stability and mechanical properties of particleboard made from acetylated bagasse. **J. Agric. Sci. Natur. Resour** (Iran), 17, 125-135

16-Lukmanul Hakim Zaini, **Mehdi Jonoobi**, Paridah Md. Tahir1, Samaneh Karimi. (2013). Isolation and characterization of cellulose whiskers from kenaf (Hibiscus cannabinus L.) bast fibers. **Journal of Biomaterials and Nanobiotechnology**, 4, 37-44

17- **Jonoobi Mehdi**, Aitomäki Yvonne, Mathew P.Aji, and Oksman K. (2013). Resin impregnation

of cellulose nanofibre networks using a thermoplastic matrix: Morphology, mechanical and optical properties. **Composites Part A: Applied Science and Manufacturing** 58, 30-35

18-, Mehran Babaee, **Mehdi Jonoobi**, Alireza Ashori, Yahya Hamzeh. (2015). Biodegradability and mechanical properties of reinforced starch nanocomposites using cellulose nanofibers. **Carbohydrate polymers**. 132, 1-8

19- Alireza Ashori, Mehran Babaee, **Mehdi Jonoobi**, Yahya Hamzeh. (2014). Solvent-free acetylation of cellulose nanofibers for improving compatibility and dispersion. **Carbohydrate polymers.** 102, 369-375

20- C Esmaeili, MM Abdi, AP Mathew, **M Jonoobi**, K Oksman, M Rezayi. (2015). Synergy effect of nanocrystalline cellulose for the biosensing detection of glucose. **Sensors.** 15 (10), 24681-24697

21- F Eslah, **M Jonoobi**, M Faezipour, M Afsharpour, AA Enayati. (2016). Preparation and development of a chemically modified bio-adhesive derived from soybean flour protein. **International Journal of Adhesion and Adhesives**. 71, 48-54

22- **M Jonoobi**, M Grami, A Ashori, G Ebrahimi. (2016). Effect of ozone pretreatment on the physical and mechanical properties of particleboard panels made from bagasse. **Measurement**. 94, 451-455

23- **M Jonoobi**, M Ghorbani, A Azarhazin, HZ Hosseinabadi. (2017). Effect of surface modification of fibers on the medium density fiberboard properties. **European Journal of Wood and Wood Products**, 1-8

24- F Eslah, **M Jonoobi**, M Faezipour, A Ashori. (2017). Chemical modification of soybean flour-based adhesives using acetylated cellulose nanocrystals. **Polymer Composites.** 1-10

25- M Sima, **J Mehdi**, R Fatemeh, P Hamidreza. (2017). Evaluating the efficiency of cellulose nanofibers in DEHP removal from water. **Desalination and Water Treatment** 77, 229–236.

26- Shoboo Salehpour, **Mehdi Jonoobi**, Masoud Ahmadzadeh, Valentina Siracusa, Fatemeh Rafieian, Kristiina Oksman. (2018). Biodegradation and ecotoxicological impact of celluose nanocomposites in municipal solid waste composting**. International Journal of Biological Macromolecules** 111 (2018) 264–270.

27- Elham Nadali, Mohammad Layeghi, Ghanbar Ebrahimi, Reza Naghdi, **Mehdi Jonoobi**, Mohammah Mehdi Khorasani, Yaser Mirbagheri. (2018). Effects of multiple extrusions on structure-property performance of natural fiber high-density polyethylene biocomposites. **Materials Research,** 21 (2).

28- Leila Mohammadi Amirabad, **Mehdi Jonoobi**, Narges Sharif Mousavi, Kristiina Oksman, Alireza Kaboorani, Hossein Yousefi. (2018). Improved antifungal activity and stability of chitosan nanofibers using cellulose nanocrystal on banknote papers. **Carbohydrate polymers,** 189, 229-237

29- Fatemeh Rafieian, M Hosseini, **Mehdi Jonoobi**, Q Yu. (2018). Development of hydrophobic nanocellulose-based aerogel via chemical vapor deposition for oil separation for water treatment. **Cellulose,** 25 (8), 4695-4710.

30- Fatemeh Rafieian, **Mehdi Jonoobi**, Q Yu. (2019). A novel nanocomposite membrane containing modified cellulose nanocrystals for copper ion removal and dye adsorption from water. **Cellulose,** 26 (5), 3359-3373.

31- Simin Zarayneh, Abbas A Sepahi, **Mehdi Jonoobi**, Hassan Rasouli. (2018). Comparative antibacterial effects of cellulose nanofiber, chitosan nanofiber, chitosan/cellulose combination and chitosan alone against bacterial contamination of Iranian banknotes. **International journal of biological macromolecules,** 118, 1045-1054.

32- **Mehdi Jonoobi**, Alireza Ashori, Valentina Siracusa. (2018). Characterization and properties of polyethersulfone/modified cellulose nanocrystals nanocomposite membranes. **Polymer Testing**, 76, 333-339.

33- Fatemeh Rafieian, Mohammad Mousavi, Q Yu, **Mehdi Jonoobi.** (2019). Amine functionalization of microcrystalline cellulose assisted by (3-chloropropyl) triethoxysilane. **International journal of biological macromolecules,** 130, 280-287.

34- Lars Berglund, F Forsberg, **Mehdi Jonoobi**, Kristina Oksman. (2018). Promoted hydrogel formation of lignin-containing arabinoxylan aerogel using cellulose nanofibers as a functional biomaterial**. RSC advances,** 8 (67), 38219-38228.

35- Sima Sepahvand, **Mehdi Jonoobi**, Alireza Ashori, F Gauvin, HJH Brouwers, Q Yu. (2019). Surface modification of cellulose nanofiber aerogels using phthalimide. **Polymer Composites**, 41 (1), 219-226.
36- Robab Ghafari, **Mehdi Jonoobi**, Leila. M Amirabad, Kristina Oksman, Ahmad. R Taheri. (2019). Fabrication and characterization of novel bilayer scaffold from nanocellulose based aerogel for skin tissue engineering applications. **International journal of biological. Macromolecules,** 136, 796-803.
37- Alireza Ashori, Fatemeh Rafieyan, Farzad Kian, **Mehdi Jonoobi**, Kamran Rezaei Tavabe. (2019). Effect of cellulose nanocrystals on performance of polyethersulfone nanocomposite membranes using electrospinning technique. **Polymer Composites,** 40 (S1), E835-E841.
38- Shoboo Salehpour, Fatemeh Rafieian, **Mehdi Jonoobi**, Kristina Oksman. (2018). Effects of molding temperature, pressure and time on polyvinyl alcohol nanocomposites properties produced by freeze drying technique. **Industrial Crops and Products**, 121, 1-9.
39- Maryam Allahdady, Sahab Hedjazi, **Mehdi Jonoobi**, Ali Abdolkhani, Laaya Jamalirad. (2019). Investigation on mechanical-thermal properties of green composite produced from polylactic acid and bagasse pulp fibers. **Journa of Forest and Wood Products**, 3, 123-129.
40- Maryam Allahdady, Sahab Hedjazi, **Mehdi Jonoobi**, Ali Abdolkhani, Laaya Jamalirad. (2019). Biodegradation behaviors and color change of composites based on type of bagasse pulp/polylactic acid. **Iran. J. Wood Pap. Ind**. 8, 1-13.
41- Sima Sepahvand, **Mehdi Jonoobi**, Alireza Ashori, F Gauvin, HJH Brouwers, Kristina Oksman. (2020). A promising process to modify cellulose nanofibers for carbon dioxide (CO2) adsorption. **Carbohydrate Polymers**, 230, 115571.
42- Robab Ghafari, R Scaffaro, A Maio, EF Gulino, GL Re, **Mehdi Jonoobi**. (2020). Processing-structure-property relationships of electrospun PLA-PEO membranes reinforced with enzymatic cellulose nanofibers. **Polymer Testing**, 81, 106182.
43- **Mehdi Jonoobi**, Masoud Shafie, Younes Shirmohammadli, Alireza Ashori, HZ Hosseinabadi, Tizazu Mekonnen. (2020). A Review on Date Palm Tree: Properties, Characterization and Its Potential Applications. **Journal of Renewable Materials**, 7 (11), 1055-1075.
44- Maryam Allahdady, Sahab Hedjazi, **Mehdi Jonoobi**, Ali Abdulkhani, Laaya Jamalirad. (2020). The influence of bio-fibers from different pulping processes on the pulp-polylactic acid composites (PPCs) properties from sugarcane bagasse. **Nordic Pulp & Paper Research Journal**, 34 (3), 239-249.
45- Davood Efhamisisi, MF Thévenon, M Sharifat, A Taromian, **Mehdi Jonoobi**. (2020). Evaluation of furfural/urea complexes to improve properties of commercial birch wood (Betula sp.). EMBRAPA

CONFERENCES PROCEEDING:
1-Mohammad Reza Mastery Farahani and **Mehdi Jonoobi**. (2007). Dimensional stability and mechanical properties of particleboard made from carboxylic acid anhydride modified bagasse. International Conference in wood science, 381. China.
2-**Mehdi Jonoobi**, Jalaludin Harun, Alinaghi Karimi. (2009). Isolation of nanofibers as new product from bleached kenaf (Hibiscus cannabinus) pulp. International Conference on Kenaf and Allied Fibers (ICKAF2009). Malaysia.
3-Shakeri Alireza, **Joonobi Mehdi**. (2010). Physicochemical characterization of nanofiber of different treatment on Kenaf bast fiber. Internaonal Conf on Nanotechology for Forest Product Industry, 27- 29 Sep., Espoo, Finland.
4-**Mehdi Jonoobi**, Aji P Mathew, Kristiina Oksman. (2011). Separation process and haracteristics of cellulose nanofibers extracted from industrial bioresidue. 19th Annual Bioenvironmental Polymer Society (BEPS) Meeting. Vienna, Austria.
5-**Mehdi Jonoobi**, Aji P Mathew, Kristiina Oksman. (2012). Sludge raw material for production of cellulose nanofibers. 12 th International Conference on Biocomposites. 6-8 May. Marriott Gateway on the Falls Hotel, Niagara Falls, Ontario, Canada.
6-**Mehdi Jonoobi**, Kristiina Oksman (2012). Study on the energy consumption and cost of cellulose

nanofibers produced by mechanical process. EKMANDAGARNA Framtidens skogsbaserade material den 24–25 JANUARI till IVA, Kungl. Ingenj.rs Vetenskaps Akademien Grev Turegatan 16, Stockholm, Sweden.

7-**Mehdi Jonoobi**, Kristiina Oksman. (2012). Low cost cellulose nanofibers from rejected fibers. Nanoparticles and composites workshop 23-24 February, Oulu, Finland.

8- Mahnaz M Abdi, Chakavak Esmaeili, Aji P Mathew, **Mahdi jonoobi**, Kristiina Oksman. (2016). Conducting polymer composite based on nano-cellulose for biosensing application. 5th Euro Biosensors and Bioelectronics Conference, Valencia, Spain.

9- Mehran Babaee, Yahya Hamzeh, **Mehdi Jonoobi**. (2014). Surface modification of cellulose nanofibers to hydrophobic surface through acetylation. Physical Chemistry Conference, Tehran, Iran.

10- **Mehdi Jonoobi**, Amar Mohanty, Manjusri Misra. (2014). Bioplastics: A review on current status, processing, properties and application. 13th International Symposium on Bioplastics, Biocomposites & Biorefining (ISBBB), Guelph, Canada.

BOOKS CHAPTER

1- Oksman, K. ,Mathew, A. P. ,**Jonoobi, M**. ,Hietala, M.&Herrera Vargas, N. (2013). Cellulose nanocomposites processing using extrusion. Production and Applications of Cellulose Nanomaterials. TAPPI Press ,Ch. 1 ,p. 99-1024 p.

2- Oksman, K. ,Mathew, A. P. ,**Jonoobi, M**. ,Siqueira, G. ,Hietala, M.&Aitomäki, Y. (2013). Cellulose nanofiber isolated from industrial side-streams. TAPPI Press ,Ch. 2.1 ,p. 187-1904 p.

3- Mahnaz M. Abdi, Anuar Kassim, **Mehdi Jonoobi** and Lim Hong Ngee. (2012). Conducting polymers for electromagnetic interference (EMI) shielding. Research Signpost, T.C. 37/661 (2), Fort P.O., Trivandrum-695 023 Kerala, India

4- PM Tahir, LH Zaini, **M Jonoobi**, HPSA Khalil. (2015). Preparation of Nanocellulose from Kenaf (Hibiscus cannabinus L.) via Chemical and Chemo-mechanical Processes. Handbook of Polymer Nanocomposites. Processing, Performance and Application. 119-144 , Springer Berlin Heidelberg.

5- **Mehdi Jonoobi**, Aji P Mathew, Kristiina Oksman. (2014). Natural Resources and Residues for Production of Bionanomaterials. Handbook of Green Materials: Processing Technologies, Properties and Applications, Singapore: World Scientific and Engineering Academy and Society.