Curriculum Vitae

Dr. Mehdi Rahmaninia

Date of Birth: 28 - Aug. - 1979
Dept. of Wood and Paper Sciences and Technology, Faculty of Natural Resources,
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Education/Employment

- Associate Professor of Tarbiat Modares University (TMU)	2019.02-present
- Assistant Professor of TMU	2011.09-2019.02
- Visiting Assistant Professor in Shahid Beheshti University	2009.09-2011.09
- Ph.D. Pulp and Paper Science in University of Tehran (Thesis: Improving Drainage and Strength of OCC Pulp Using Cationic Starch - Nanosilica System)	2004-09-2009.03
- Visiting Lecturer and Sabbatical in Asian Institute of Technology (AIT)- Thailand	2007.10-2008.07
- M.Sc. of Wood and paper Science and Technology (Thesis: The effect of Aging on Deinkability of Newspaper)	2002.09-2004.09
- B.Sc. Wood and paper Science and Technology (Thesis: Chemical Analysis of CMP Mill Sludge)	1998.09-2002.09

Research Interests

1- Recycling of Waste lignocellulosic materials for production of new value-added bioproducts.
2- Nanotechnology in Paper and Cellulose Sciences and Industries (nanofibers and Nanoparticles production and applications).

3- Papermaking and paper recycling (Process and Product Optimization, Wet End Chemistry, Paper Physics and Mechanics).

Honors

- Second rank among B.Sc. students of wood and Paper at University of Tehran
- First rank among M.Sc. students of wood and Paper at University of Tehran
- Second rank among PhD students of wood and Paper at University of Tehran
- The Member of Iranian Academy of Sciences (2021-Present)

Teaching

- Wood Chemistry Lab for B.Sc. students - University of Tehran (2005-2006)
- Technology of Pulp and Paper Lab for B.Sc. students - University of Tehran (2005-2008)
- Basic Principle of Spectroscopy for M.Sc. Students - TMU (2011-2013)
- Advanced Paper Recycling for M.Sc. Students - TMU (2012-Present)
- Advanced Pulp and Paper Lab for M.Sc. Students - TMU (2012-Present)
- Paper Physics and Mechanics for M.Sc. Students - TMU (2017- Present)
- Upgrading and optimization of Recycled Lignocellulosic Fibers for PhD Students - TMU (2019-present)

Research Projects

- **National project**: University of Mazandaran. “Preservation of Wood for using in Caspian Sea” (2004-2005).
- **National project**: University of Tehran. “Papermaking with APMP pulp from Wheat Straw” (2005-2006).
- **National project**: University of Tehran. “Using Cationic Starch-nanosilica System in Recycled OCC Pulp” (2007-2008).
- **National project**: Shahid Beheshti University. “Thermal Accelerated Aging of CMP Paper” (2009-2010).
- **National project**: Shahid Beheshti University. “Enzymatic Treatment of OCC Pulp” (2009-2010)
- **National project**: Iran National Science Foundation (INSF). “Using Chitosan and Nano-chitosan Biopolymers in Wet End Chemistry of paper Recycling” (2015-2020).
- **National project**: Iran National Science Foundation (INSF). “Feasibility of Using Cheap minerals with Chitosan Biopolymer for Improving the Process Properties of Recycled Fibers Reinforced with Recycled Lignocellulosic Nano Fibers” (2021-2023).
- **International Project**: Iran National Science Foundation (INSF) and Chinese Academy of Science (CAS). “Add value to agricultural waste: preparation of advanced lignocellulosic nanofibrills from agricultural residues for reinforcement of recycled cellulosic products” (2024- 2027).
- **International Project**: Iran National Science Foundation (INSF) and National Natural Science Foundation of China (NSFC). “Novel integrated biorefining of sugarcane bagasse: synergistic mechanism of fractionation-conversion to advanced biobutanol and LCNF-reinforced packaging paper” (2025- 2028).

Students and Thesis Supervised/Advised/Examined

- Supervising about 30 Theses in different Universities.
- Advising about 22 Theses in different Universities.
- Examiner of about 55 Theses in different Universities.

Reviewing Duties

- Reviewer of several articles in different well-known International Journals (such as: ***Cellulose, Carbohydrate polymers, International Journal of Biological Macromolecules, Bioresources***, ***Biomass conversion and biorefinery, Biocatalysis and agricultural biotechnology, Materials today communications, Cellulose Chemistry and Technology, Forestry****, etc)*.

- Reviewer of several articles in Different Iranian Pulp and Paper Journals.

Executive Responsibility

- The Member of Iranian Academy of Sciences (2021-Present)
- The Member of Scientific Verification Council of Tarbiat Modares University (TMU) (2023-2025)
- The Vice Chancellor of Students Affairs- Natural Resources and Marine Sciences Faculty, TMU (2023-Present)
- The Member of Scientific Verification Committee of the Natural Resources and Marine Sciences Faculty, TMU (2021-Present)
- Head of Wood and Paper Sciences Department (2019-2021)
- Member of technical committee of several pulp and paper standards in Iran National Standards Organization (2011-Present).
- Member of Monitoring and Evaluation Committee of the Natural Resources and Marine Sciences Faculty, TMU (2021-2023)
- Associate Editor of Lignocellulose Journal (International Journal) (2010-present)
- Board of Directors in Students' Association of Wood and Paper Science (SWPS) for 3 years (1999-2002).
- Member of Iran Association of Wood & Paper (2008-present).
- Member of scientific and executive committee of WET END CHEMISTRY workshop in Shahid Beheshti University (2010).
- Member of HSE committee of TMU (2014-2021).

Publications in Journals
(The ones specified with * are indexed in Scopus and JCR)

***** Rahmaninia, M, Jahan, LA, & Pirjani, A (2007). The Effect of Newspaper Aging on Some Physical and Mechanical Properties of Recycled Paper. *Journal of the Iranian Natural Resources*, *60*(1), 257-266.

* Rahmaninia, M, Latibari, AJ, Mirshokraei, SA, & Azadfallah, M (2008). The influence of newspaper aging on optical properties of its de-inked pulp. *Turkish Journal of Engineering and Environmental Sciences*, *32*(1), 35-39.

* Kermanian, H, Razmpour, Z, Ramezani, O, & Rahmaninia, M (2010). Water Consumption Reduction Strategies in Iranian Recycled Packaging Paper Mills. *Environmental Sciences, 8*(1), 115-134.

* Khosravani, A, Latibari, AJ, Mirshokraei, SA, Rahmaninia, M, & Nazhad, MM (2010). Studying the effect of cationic starch-anionic nanosilica system on retention and drainage. *BioResources*, *5*(2), 939-950.

* Rahmaninia, M, Mirshokraei, SA, Ebrahimi, GH, & Mohammad, NM (2011). Effect of Cationic Starch-nanosilica System on Retention and Drainage of Washed OCC Pulp. *Journal of Forest and Wood Products (JFWP)*

* Razmpour, Z, Kermanian, H, Ramezani, O, Mahdavi, S, & Rahmaninia, M (2012). The Effect of NSSC Waste Paper Recycling Times on the Properties of the Produced Recycled Pulp. *Environmental Sciences, 9*(2), 1-11.

* Ramezani, O, & Rahmaninia, M (2012). Lignocellulose–An Online Sceintific Journal Devoted to All Issues Related to Lignocellulosic materials. *Lignocellulose Journal*, *1*(1), 1-2.

* Kermanian, H, Razmpour, Z, Ramezani, O, Mahdavi, S, Rahmaninia, M, & … (2013). The influence of refining history of waste NSSC paper on its recyclability. *BioResources*, *8*(4), 5424-5434.

* Khosravani, A, & Rahmaninia, M (2012). Paper recycling, an old but still effective solution. *Lignocellulose*, *1*(3), 1-2.

* Varshoei, A, Javid, E, Rahmaninia, M, & Rahmany, F (2013). The Performance of Alkylketene Dimer (AKD) for the Internal Sizing of Recycled OCC Pulp. *Lignocellulose*.

* Khosravani, A, & Rahmaninia, M (2013). The potential of nanosilica–cationic starch wet end system for applying higher filler content in fine paper. *BioResources*, *8*(2), 2234-2245.

* Rahmaninia, M, & Khosravani, A (2015). Improvin the Paper Recycling Process of Old Corrugated Container Wastes. *Cellulose Chemistry and Technology*, *49*(2), 203-208.

* Alishahi, S, M., Ramezani, O., Kermanian, H., Rahmaninia, M., Nasiri, & …, S.A (2014). The influence of drying conditions on the chemical characteristics of bagasse recycled pulp. *Iranian Journal of Wood and Paper Science Research*, *29*(2), 190-198.

* Ebrahimi, M, Ramezani, O, Rahmaninia, M, Kermanian, H, & Andalibian, MA (2014). Performance of Amylase on Properties of Recycled OCC Pulp Pre-soaked at Different pH(s). *Journal of Forest and Wood Products*, *67*(2), 325-333.

* Resalati, H, Feizmand, M, Kermanian, H, & Rahmaninia, M (2015). The effects of recycling the pre-extracted liquor on subsequent pre-extraction and soda- AQ pulping of wheat straw. *Nordic Pulp and Paper Research Journal*, *30*(1), 160-164.

* Rahmaninia, M, Rohi, M, Ramezani, O, & Zabihzadeh, SM (2015). The Effect of Pulp Suspension pH on the Performance of Chitosan –Nanobentoniteas a Dry Strength Additive in Hardwood CMP Pulp. *Journal of Forest and Wood Product*, *68*(2), 347-357.

* Khosravani, A, Asadollahzadeh, M, Rahmaninia, M, Bahramifar, N, & … (2016). The Effect of External and Internal Application of Organosilicon Compounds on the Hydrophobicity of Recycled OCC Paper. *BioResources*, *11*(4), 8257-8268.

* Rohi, M, Ramezani, O, Rahmaninia, M, Zabihzadeh, SM, & Hubbe, M (2016). Influence of Pulp Suspension pH on The Performance of Chitosan as a Strength Agent for Hardwoods CMP Paper. *Cellulose Chemistry and Technology 50 (7-8)*, 873-878.

Hosseinian, K, Rahmaninia, M, & Khosravani, A (2016). Comparison of Chitosan Performance in a Single or Nanoparticle System as a Wet End Additive in Recycled Printing and Writing Papers. *Journal of Forest and Wood Product*, *68*(4), 815-827.

* Rahmaninia, M, Javid, E, & Varshoei, A (2016). Process Variables and the Performance of Cationic Rosin as an Internal Sizing Agent in Recycled Corrugated Container Pulp. *Bioresources*, *11*(2), 5333-5342.

* Rohi, M., Ramezani, O., Rahmaninia, M., Zabihzadeh, S. M., Hubbe, M.A. (2016). The influence of pulp suspension pH on the performance of chitosan as a strength agent for paper. *Cellulose Chemistry and Technology*, 50 (7-8), 873-878.

* Khosravani, A., Asadolahzadeh, M. T., Rahmaninia, M., Bahramifar, N., Azadfallah, M. (2016). The Effect of External and Internal Application of Organo- silicon on Hydrophobicity of Recycled OCC Paper. *Bioresources*, 11(4),8257-8268.

* Rahmaninia, M., Hosseinian, K., Khosravani, A. (2016). The influence of nanochitosan addition on the process and quality properties of printing and writing paper made from recycled fibers. Journal of Forest and Wood Product. 69 (4), 831-840

* Sabazodkhiz, R., Rahmaninia, M., Ramezani, O. (2017). Interaction of Chitosan Biopolymer with Silica Nano-particle as a Novel Retention/Drainage and Reinforcement Aid in Recycled Cellulosic Fibers. *Cellulose,* 24(8), 3433–3444.

* Khosravani, A., Mehranfar, A. H., Rahmaninia, M. (2017). The effect of cationic starch degree of substitution on nanoparticle system performance in old corrugated containers recycling. Journal of Forest and Wood Product. 70 (1), 147-155.

* Kermanian, H., Rahmaninia, M., Ramezani, O., Abdi, M., Madahi, N. K. (2017). Effect of thermal accelerated aging of mixed hardwoods CMP paper on mechanical and

optical properties of its recycled pulp. *Journal of Forest and Wood Product.* 69 (4), 821-830.

* Jahanshahlou, S., Khosravani, A., Rahmaninia, M. (2017). Comparing The Effect of Silica Sol and Bentonite Nanoparicles on The Performance of Cationic Starch With Respect to Drainability, Retention and Strength Properties of Recycled Paper. *Iranian Journal of Wood and Paper Science Research (IJWPR),* 32(2), 227-237.

* Rahmaninia, M., Rohi, M., Hubbe, M.A. Zabihzadeh, S. M., Ramezani, O. (2018). The performance of chitosan with bentonite microparticles as wet-end additive system for paper reinforcement. *Carbohydrate Polymer*, 179(1), 328-332.

* Hassannejad, H., Shalbafan, A., Rahmaninia, M. (2018). Reduction of formaldehyde emission from medium density fiberboard by chitosan as scavenger. *The Journal of Adhesion*, DOI: 10.1080/00218464.2018.1515631

* Ahmadi ladjimi, A., Azadfallah, M., Rahmaninia, M., Hamzeh, Y. (2018). Potential of GL as cationic polymer to control stickies of OCC pulp. *Iranian journal of Wood and Paper Science Research (IJWPR),* 33(2), 256-259.

* Ashrafi Rad, B., Azadfallah, M., Kolaei Moakhar, F., Izadyar, S., Rahmaninia, M. (2018). Hydrophobization of paper using organosilane and titanium dioxide nanoparticles applying layer by layer method. *Iranian Journal of Wood and Paper Science Research,* 32 (4), 530-540

* Amiri, E., Rahmaninia, M., Khosravani, A., (2019). Effect of Chitosan Electrostatic Charge on the Performance of Chitosan-Nanosilica in Recycled Old Corrugated Container Pulp. *Iranian journal of wood and paper industries (IJWP),* 9 (3), 459-469.

* Amiri, E., Rahmaninia, M., Khosravani, A. (2019). Effect of Chitosan Molecular Weight on the Performance of Chitosan-silica Nanoparticle System in Recycled Pulp, *BioResources,* 14 (4), 7687-7701.

* Hassannejad, H., Shalbafan, A., Rahmaninia, M. (2020). Formaldehyde adsorption capacity of chitosan derivatives as bio-adsorbents for wood-based panels. International Journal of Adhesion and Adhesives, 102, https://doi.org/10.1016/j.ijadhadh.2020.102669

* Hashemi Sangtarashani, S.M. Rahmaninia, M., Behrooz, R., Khosravani, A. (2020). Lignocellulosic hydrogel from recycled old corrugated container resources using ionic liquid as a green solvent. Journal of Environmental Management, 270, 2020, https://doi.org/10.1016/j.jenvman.2020.110853

* Fatehi, E., Rahmaninia, M., Khosravani, A., Iron, Z. (2020). Raw and Oxidized Starch Performance as Reinforcing Additives of Internal Bond in Recycled Multilayer Paperboards", Vol. 35, No.1, 76-87, 2020, 10.22092/IJWPR.2020.341239.1591

* Mehranfar, A. H., Khosravani, A., Rahmaninia, M. (2020). The Effect of Electerical Conductivity on the Performance and Interaction of Cationic Starch-Anionic

Nanosilica in Pulp Slurry. *Iranian Journal of Wood and Paper Science Research,* 35 (1), 102-112.

* Sayadi Milani, H., Rahmaninia, M. (2020). Using Zeolite as a Filler with Chitosan Biopolymer in Papermaking. *Iranian journal of wood and paper industries (IJWP),* 11 (3), 407-417.

* Najideh, R., Rahmaninia, M., Khosravani, A. (2022). Cellulose Nanofibers Made from Waste Printing and Writing Papers and its Effect on the Properties of Recycled Paper. *Iranian journal of wood and paper industries (IJWP), 13 (1), 103-113.*

* Wu, M., Liao, K., Liu, C., Yu, G., Rahmaninia, M., Li, H., Li, B. (2021). Integrated and sustainable preparation of functional nanocellulose via formic acid/choline chloride solvents pretreatment. *Cellulose*, 28(15), 9689-9703.

* Shamsi, S. S., Khosravani, A., Rahmaninia, M. (2021). The effect of fractionation and fine material removal from old corrugated container pulp on the properties of the produced paperboard in comparison to long fiber application. *Iranian Journal of Wood and Paper Science Research*, 36 (4), 382-393

* Bagheri, S., Rahmaninia, M., Behrooz, R. (2021). Performance of Urea/NaOH as a Green Solvent in Dissolving Recycled Cellulosic Fiber Fines Residues. *Cellulose Chemistry and Technology*, 55 (9-10), 971-979.

* Taheri, A. A., Rahmaninia, M., Khosravani, A. (2022). Interaction of the Electrical Conductivity of Recycled Pulp Colloidal Suspension with Chitosan and Bentonite as a Papermaking Additive System. *BioResources*, 17(1), 1805-1817.

* Sayadi Milani, H., Rahmaninia, M., (2022). The Influence of Mixing Method of lignocellulosic Nanofibers with Recycled Pulp in the Presence of Microparticle System on the Final Paper Properties, *Iranian journal of wood and paper industries (IJWP),* 11(3), 407-417.

* Hosseini, S.A., Khosravani, A., Rahmaninia, M. (2022). A Comparison on the performance of cationic starch in external and internal applications for recycled linerboard. *Iranian Journal of Wood and Paper Industries*, 13 (3), 301-311.

* Rohi Gal, M., Rahmaninia, M., Hubbe, M., (2023). A comprehensive review of chitosan applications in paper science and technologies. *Carbohydrate Polymers*, 309, 120665

* Kalagar, R., Rahmaninia, M., Younesi, H., (2023). Using Chitosan as a Chelating Agent in Deinking of Recycled Old Newsprint Pulp. *Journal of Forest and Wood Products,* 76 (1),

* Zhang, Y., Deng, W., Wu, M., Rahmaninia, M., Xu, C., Li, B., (2023), Tailoring Functionality of Nanocellulose: Current Status and Critical Challenges. *Nanomaterials*, 13, 1489.

* Milani, H. S., Rahmaninia, M., & Li, B., (2024). Improved Drainage of LNFC-reinforced Recycled Pulp and Mechanical Properties of End Papers by the Zeolite-Chitosan Microparticle Drainage Aid System. *BioResources*, 19(1), 84-102.

* Najideh, R., Rahmaninia, M., & Khosravani, A. (2024). Recyclability of Wastepaper Containing Cellulose Nanofibers. *BioResources*, 19(4), 8712-8729.

* Deng, W., Zhang, Y., Wu, M., Liu, C., Rahmaninia, M., Tang, Y., & Li, B. (2024). A tough, stretchable, adhesive and electroconductive polyacrylamide hydrogel sensor incorporated with sulfonated nanocellulose and carbon nanotubes. *International Journal of Biological Macromolecules*, 279, 135165.

* Hosseinifard, M. S., Rahmaninia, M., Rangavar, H., & Asghari, M. (2024). The Effect of Applying Old Corrugated Container Recycled Fibers on the Properties of Aerated Fiber-Cement Composite, Iranian Journal of Wood and Paper Industries. 15 (2), 169-182

* Cheng, N., Liu, C., Gao, Y., Wu, M., Yu, G., Chen, C., Rahmaninia, M., Shen, J., & Li, B. (2025). Ultra-Elastic, Durable, Bio-Degradable, and Recyclable Pulp Foam as an Air Dielectric Substitute for Sustainable Capacitive Pressure Sensing. *Advanced Functional Materials*, 2423122.

* Wu, M., Ding, L., Bai, X., Cao, Y., Rahmaninia, M., Li, B., & Li, B. (2024). Cellulose-Based Suture: State of Art, Challenge, and Future Outlook. *Journal of Bioresources and Bioproducts*.

* Rahmaninia, M., Rahmati, Y., & Tabarsa, M., (2025). Upgrading Recycled Paper Using Astragalus gossypinus Tragacanth Gum as a Bio-based Additive. BioResources, 20 (2), 4365-4377.

* Asghari, M., Rahmaninia, M., (2025). Feasibility of using tragacanth gum and Poly Aluminum Chloride (PAC) for improving the paper recycling process. Iranian Journal of wood and paper industries 16 (2), 209-218

* Yu, X., Gong, R., Wu, M., Gao, Y., Li, Q., Zhang, F., Rahmaninia, M., Li, B., & Tang, Y., (2025). Impact of anti-solvents on the characteristics of hemicellulose

fractionated from bleached bamboo pulp using lithium bromide hydrates. Carbohydrate Polymers, 360, 123617.

* Wu, M., Cao, Y., Song, L., Jiang, T., Ding, L., Bai, X., Rahmaninia, M., Li, Z., Li, B., & Li, B. (2026). Cellulose Formate-Based Surgical Sutures with Tunable Absorbability and Enhanced Biocompatibility. Small, e13264.

* Kool, F., Rahmaninia, M., Behrooz, R., & Li, B., (2026). Structural changes of bagasse cellulosic fibers during several recycling processes: A comprehensive study. Cellulose, Under Final Review.

Conference Publication

National Conferences

Publishing/Presenting about 57 Papers in National Conferences.

International Conferences

Rahmaninia, M., Mirshokraei, S. A., Ebrahimi G., Khosravani, A., Nazhad, M. M., "Effect of Cationic Starch- Nanosilica System on Drainage of OCC Pulp ", NanoThailand Conference, Poster Presentation, 2008

Khosravani, A., Latibari, A. J., Mirshokraei, S. A., Tajvidi, M., Rahmaninia, M., Nazhad, M. M., " The Performance of Nanoparticles in Relation With Zeta Potential of Wet-end System", NanoThailand Conference, Poster Presentation, 2008

Rahmaninia, M., Mirshokraei, S. A., Ebrahimi G., Khosravani, A., Nazhad, M. M., " The Role of Cationic Starch-Nanosilica System on Retention and Drainage " , Nano Bio Conference (USA), Poster Presentation, 2008

Khosravani, A., Latibari, A. J., Mirshokraei, S. A., Tajvidi, M., Rahmaninia, M., Nazhad, M. M., " MONITORING THE PERFORMANCE OF NANOPARTICLES AT WET-END SYTEM OF A PAPER MILL BY ZETA POTENTIAL" , Nano Bio Conference (USA), Oral Presentation, 2008

Attending in 2008 Asian Paper Conference, Thailand, June 2008

Khosravani, A., Rahmaninia, M., Navaee-Ardeh, S., Latibari, A. J., Nazhad, M. M., " The EFFECT OF CATIONIC STARCH-ANIONIC NANOSILICA SYSTEM ON PAPERMAKING PROCESS AND QUALITY OF THE END PRODUCTS" , 2012 International Paper Physics Conference, Stockholm(Sweden), Poster Presentation, June 10-14, 2012

Rahmaninia, M., Rohi, M., Ramezani, O., Zabihzadeh, S.M., " The EFFECT OF PULP SUSPENSION PH ON THE PERFORMANCE OF CHITOSAN AS A STRENGTH FOR PAPER" , 14th Eurppean Workshop on Lignocellulose and Pulp, France, Poster Presentation, 2016

Rahmaninia, M.,Rohi, M., Ramezani, O., Zabihzadeh, S.M." Chitosan - Bentonite as a New Wet-End Reinforcement system For Mixed Hardwood CMP pulp", Wood and Biofiber International Conference, Malysia, Oral Presentation, 2017.

Rahmaninia, M., "Chitosan as a Novel Green Additive in Paper and Cellulose Science and Technology", 2nd International Conference on Green Carbon (ICGC), Qingdao, China, Oral Presentation, 2025.

Asghari, M., Rahmaninia, M., Li, B., Chitosan as a Novel Green Additive in Paper and Cellulose Science and Technology", 2nd International Conference on Green Carbon (ICGC), Qingdao, China, Poste Presentation, 2025.

Patents

US Patent, 2020, " Chitosan-based formaldehyde scavenger and applications thereof in wood-based products"

4 published Patents in **Iranian Patent Organization**

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