C.V of Dr.Sahab Hedjazi

-Personal information:

Name: Sahab
Surname: Hedjazi
Date of birth: 1975/09/15
Place of birth: Karadj-Iran
Nationality: Iranian
Marital status: married
Children: 1

-Education:

Ph.D. Pulp and paper, University of Tehran, Iran
M.S. Wood and paper, University of Tehran, Iran
B.S. Wood and paper, Azad University, Iran

- Employment history:

Academic position: Associate professor

Host University: Gorgan University of Agricultural Sciences and Natural Resources, Faculty of Wood and Paper Engineering, Department of Paper Sciences and Engineering

Courses taught: - Chemical pulping
-Mechanical pulping

-Pulp bleaching

-Advanced pulp technology

-Production and recovery of chemicals and energy in Pulp Mill

-Lignocellulosic biorefinery

-Organic chemistry

- Mass and energy balance

- Unit operation

- Thermodynamics

- Transfer Phenomena

Areas of interest: - Chemical and mechanical pulping of lignocellulosic Biomass

- **ECF and TCF bleaching**
- **Integrated biorefinery on the basis of Lignocellulosic-Agri residues**
- **Pulp mill biorefinery**

Awards:

- **DAAD Scholarship 2002-2004, research and education at the University of Hamburg-Institute for wood chemistry and chemical wood technology under supervising of Prof.Dr. Rudolf Patt and Dr.Othar Kordsachia**
- **DAAD Scholarship 2008**
- **DAAD Scholarship 2012**

Professional experiences:

- **Academic member at the University since ۰۷/۰۴/2007**
- **Head of Department of Science and Technology of Wood and Paper, University of Tehran, 2014-2018**
- **Head of Department of Paper Science and Engineering, Gorgan University of Agricultural Sciences and Natural Resources, 2023-2025**
- **Member of the international working group of Gorgan University of Agricultural Sciences and Natural Resources, 2023-2025**
- **Invited Scholar of Department of Agricultural Sciences of Academy of Science, 2022-Now**
- **Member of editorial board of Journal of Forest and Wood Products, 2017-2020**
- **Member of editorial board of Iranian Journal of Wood and Paper Industries, 2018-2024**
- **- Member of editorial board of Journal of Wood and Forest Science and Technology, 2024-Now**
- **Member of Iranian scientific association of wood and paper industries (ISSWPI), 2021-2024**
- **Scientific secretary of 4th national conference of knowledge and innovation in the wood and paper industry, 2022**

JCR - Journal Papers

1- **Ghaffarzadeh, O., Hedjazi, S., Abdulkhani, A., Ataeefard, M. and Taherzadeh, M. (2025) Intelligent modeling of printability of liner paper coated with modified soda lignin, Biomass Conversion and Biorefinery, Online published, https://doi.org/10.1007/s13399-025-06817-w**

2- **Ghahramani, S., Hedjazi, S., Izadyar, S., Fischer, S. and Abdulkhani, A. (2025) Influence of different pulping processes, cold caustic extraction, and bleaching as common post-treatments on properties of produced lignocellulose nanocrystals (LCNCs) from bagasse, International Journal of Biological Macromolecules, https://doi.org/10.1016/j.ijbiomac.2025.141448.**

3- **Rashidi, O., Abdulkhani, A., Hedjazi, S., Ashori, A., Hosseinzadeh, J. and Sun, F. (2025) Preparation and characterization of cellulose from wheat straw using formic/acetic acid pulping and Cu-activated hydrogen peroxide bleaching, Cellulose, 32 (1): 165-185**

4- **Ghahramani, S., Hedjazi, S., Izadyar, S., Fischer, S. and Abdulkhani, A. (2023) A facile, low-thermal, and environmentally friendly method to improve the properties of lignin-containing cellulose nanocrystals (LCNCs) and cellulose nanofibrils (LCNFs) from bagasse unbleached soda pulp, Biomass Conversion and Biorefinery, 14 (24): 31051-31075**

5- **Moradian Gilan, K., Hedjazi, S., Le, H.Q., Abdulkhani, A. and Sixta, H. (2023) The potential of different hemicelluloses extraction methods in Conversion of environmentally friendly ECF and TCF bleached paper-grade bagasse soda pulp to dissolving-grade pulp, Biomass Conversion and Biorefinery, 14 (24): 31777-31787**

6- **Abdulkhani, A., Siahrang, M., Echresch Zadeh, Z., Hedjazi, S., Torkameh, S. and Faezipoor M.M. (202۳) Direct catalytic conversion of bagasse fibers to furan building blocks in organic and ionic solvents, Biomass Conversion and Biorefinery, 13 (7): 6037-6048**

7- **Shokri, Shokoufeh, Hedjazi, S., Le, H.Q., Abdulkhani, A. and Sixta, H. (2022) High-purity cellulose production from birch wood by γ-valerolactone/water fractionation and IONCELL-P process, Carbohydrate Polymers, 288 (119364): 1-8**

8- **Moezzipour, B., Hedjazi, S., Yousefi, H. and Ahmadi, M. (2021) The Influence of Pulping Process and Energy Consumption on Properties of Nanofibrillated Lignocellulose (NFLC) Films Isolated from Wheat Straw, Drvna Industrija, 72 (4): 327-336**

9- **Moradian Gilan, K., Hedjazi, S., Le, H.Q., Abdulkhani, A., Ceccherini, S., Viljanen, M. and Sixta, H. (2022) Conversion of bleached soda bagasse paper-grade pulp to dissolving-grade pulp using different hemicelluloses removing post-treatments with emphasis on IONCELL-P process, Holzforschung, 76 (5): 473-483**

10- **Abdulkhani, A., Najd Mazhar, A., Hedjazi, S. and Hamzeh, Y. (2020) Preparation of xylan bio-composite films reinforced with oxidized carboxymethyl cellulose and nanocellulose, Polymer Bulletin, 77: 6227-6239**

11- **Allahdady, M., Hedjazi, S., Jonoobi, M., Abdulkhani, A. and Jamalirad L. (2019) The infuence of bio-fbers from diferent pulping processes on the pulp-polylactic acid composites (PPCs) properties from sugarcane bagasse, Nordic Pulp & Paper Research Journal, 34 (3): 239-250**

12- **Alinyay Lakani, S., Hedjazi, S., Abdulkhani, A. (2019) Chemical analysis and antioxidant activities of bark extracts from four endemic species of Hyrcanian forests in Iran, Holzforschung, 73 (3): 287-294**

13- **Jamalirad, L., Aminian, H., Hedjazi, S. (2019) Exploring the potential of milkweed stalk in wood plastic manufacture, Journal of Natural fibers, 16(1): 77-87**

14- **Abdulkhani, A., Amiri, E., Sharifzadeh, A., Hedjazi, S., and Alizadeh, P. (2019) Concurrent production of sodium lignosulfonate and ethanol from bagasse spent liquor, Journal of Environmental Management, 231: 819-824**

15- **Ahmadi, M., Hedjazi, S., and Yousefi, H. (2018) Comparative properties of nanofibers produced using unbleached and bleached wheat straw pulps, Nordic Pulp & Paper Research Journal, 33(3): 439–447**

16- **Hosseini, S.B., Hedjazi, S. and Jamalirad, L. (2017) Investigation on physical and mechanical properties of pulp–plastic composites from bagasse, Wood Material Science & Engineering, Vol. 12, NO. 5, 279–287**

17- **Abdulkhani, Ali., Alizadeh, Peyman., Hedjazi, Sahab and Hamzeh, Yahya, (2017) Potential of Soya as a raw material for a whole crop biorefinery, Renewable and Sustainable Energy Reviews, 75: 1269-1280**

18- **Habashi,M.G., Hedjazi, S., Ashori, A. and Abdolkhani, A. (2014) Environmental Friendly Pulping of Kenaf Using Monoethanolamine: Influence of the Process Variables on the Strength Properties. Advances in Polymer Technology , 33: 1-6**

19- **Hasanjanzadeh, H., Hedjazi, S., Ashori, A., Mahdavi, S. and Yousefi, H. (2014) Effects of hemicellulose pre-extraction and cellulose nanofiber on the properties of rice straw pulp. International Journal of Biological Macromolecules, 68: 198-204**

20- **Hosseini, S.B., Hedjazi, S., Jamalirad, L. and Sukhtesaraee, A. (2014) Effect of nano-SiO2 on physical and mechanical properties of fiber reinforced composites (FRCs). Journal of the Indian Academy of Wood Science, 11: 116-121**

21- **Dashti, H., Tarmian, A., Faezipour, M., Hedjazi, S. and Shahverdi, M. (2013) Mass Transfer Through Microwave - Treated Fir Wood (Abies alba L.) : A Gymnosperm Species with Torus Margo Pit Membrane. Drying Technology, 31: 359-364**

22- **Yousefi, H., Faezipour, M., Hedjazi, S., Mousavi, M.M., Azusa,Y. and Adli, A.H.H. (2013) Comparative study of paper and nanopaper properties prepared from bacterial cellulose nanofibers and fibers/ground cellulose nanofibers of canola straw. Industrial Crops & Products, 43:732-737**

23- **Dashti, H., Tarmian, A., Faezipour, M., Hedjazi, S. and Shahverdi, M. (2012) Effect of pre – steamng on mass transfer properties of fir wood (Abies Alba L.) : A Gymnosperm Species with Torus Margo Pit Membrane. Bioresources, 7: 1907-1918**

24- **Kalagar, M., Khademieslam, H., Bazyar,B. and Hedjazi, S. (2011) Morphology and mechanical properties of alkali - treated rice straw flour - polypropylene composites. Bioresources, 6: 4238-4246**

25- **Jamalirad, L., Doosthosseini, K., Koch, G., Mirshokraee, S.A. and Hedjazi,S. (2011) Physical and mechanical properties of plywood manufactured from treated red - heart beech (Fagus orientalis L. wood veneers). Bioresources, 6: 3973-3986**

26- **Ahmadi, M., Latibari, A.J., Faezipour, M. and Hedjazi, S. (2010) Neutral sulfite semi-chemical pulping of rapeseed residues. Turkish journal of Agriculture and Forestery, 34:11-17**

27- **Hedjazi, S., Kordsachia, O., Patt,R. and Kreipl, A. (2009) MEA/Water/AQ pulping of wheat straw. Holzforschung, 63: 505-512**

28- **Hedjazi, S., Kordsachia, O., Patt, R., Jahan Latibari, A. and Tschirner, U. (2009) Alkaline sulfite-anthraquinone (AS/AQ) pulping of wheat straw and totally chlorine free (TCF) bleaching of pulps. Industrial crops and products, 29: 27-36**

29- **Hedjazi, S., Kordsachia, O., Jahan Latibari, A. and Tschirner, U. (2009) Alkaline sulphite-anthraquinone (AS/AQ) pulping of rice straw and totally chlorine free (TCF) bleaching of pulps. APPITA J., 62: 137-145**

30- **Hedjazi, S., Kordsachia, O., Patt, R., Jahan Latibari, A. and Tschirner, U. (2008) Bagasse alkaline sulfite-anthraquinone (AS/AQ) pulping and totally chlorine free (TCF) bleaching. Holzforschung, 62: 142-148**

31- **Latibari, A.J., Hedjazi, S., Patt, R., Kordsachia, O. and Tschirner, U. (2006) Totally chlorine free (TCF) bleaching of wheat straw Soda/AQ pulp. Cellulose Chemistry and Technology 2006, 40(6):413-420**

Papers in Iranian Journals

1- **Bashardoust, Z., Hedjazi, S. and Hamzeh, Y. (2025) Production of chemical pulp using carbonate process from wheat straw, Iranian Journal of Wood and Paper Industries, Vol. 16, No. 1: 1-14.**

2- **Abbasi, R. and Hedjazi S. (2025) Utilization of lignin as non-fossil and renewable polymer for polyurethane production, Polymerization, Vol. 14, No. 4: 40-51.**

3- **Saedi, H., Dehghani Firouzabadi, M.R., Rudi, H.R., Hedjazi, S., Mashkour, M. and Govahi, M. (2024) Effect of crosslinking agent type on the properties of PVA-Sodium Alginate-Nanocellulose pad obtained by electrospinning, Journal of Wood and Forest Science and Technology, Vol. 31, No. 3: 117-135.**

4- **Kalantari. A., Jonoobi, M., Moradpour, P. and Hedjazi, S. (2024). Investigating the possibility of direct production of cellulose acetate polymer from waste banknotes, Iranian Journal of Wood and Paper Industries, Vol. 15, No. 2: 207-218.**

5- **Ghaffarzadeh, O., Hedjazi, S., Abdulkhani, A., Ataeefard, M. and Taherzadeh, M. (2024) Evaluation of printability indexes of testliner paper sized by the**

extracted lignin of soda pulping, Journal of Color Science and Technology, Vol. 18, No. 2: 121-133

6- Ghahramani, S., Hedjazi, S. and Abdulkhani, A. (2024) Investigating the application of nano chitosan in the paper and food packaging industry. Scientific journal of packaging science and art, Vol. 15, No. 57: 61-68

7- Heidari Emamverdikhan, H., Hedjazi, S. and Aryaie Monfared, M.H. (2024) The potential of using tomato stalk pulp as long fibers in reinforcement of wheat straw commercial cold soda pulp. Iranian Journal of Wood and Paper Industries, Vol. 14, No. 4: 433-444.

8- Jafari, B., Hedjazi, S., Hamzeh, Y. and Abdulkhani, A. (2023) Investigation on the potential of using the residual fibers from fractionation of canola stalk with glycerol in pulp production. Iranian Journal of Wood and Paper Industries, Vol. 14, No. 1: 139-153.

9- Ghaffarzadeh, O., Hedjazi, S., Abdulkhani, A., Ataeefard, M. and Taherzadeh, M. (2023) Surface sizing of testliner paper with aminated soda lignin and evaluation of the surface, barrier and mechanical properties of produced papers. Forest and Wood Products, Volume 76, No. 2: 165-179.

10- Abdulkhani, A., Maleki, A., Hosseinzade, J., Askari, F., Hedjazi, S. and Gholami, D. (2023) Investigation on thermal and chemical properties of bio-adhesive based on tannin and lignosulfonate. Forest and Wood Products, Volume 76, No. 2: 113-121.

11- Ghaffarzadeh, O., Hedjazi, S., Abdulkhani, A., Ataeefard, M. and Taherzadeh, M. (2023) Improvement of physical and mechanical properties of testliner coated by unmodified and modified lignins. Iranian Journal of Wood and Paper Industries, Vol. 14, No. 1: 1-15.

12- Ghahramani, S., Hedjazi, S., Izadyar, S., Fischer, S. and Abdulkhani, A. (2023) Production of nanocrystals and nanofibrils from unbleached and bleached soda pulp with ECF_{light} bleaching sequence and comparison of their morphological and thermal properties. Iranian Journal of Wood and Paper Industries, Vol. 13, No. 4: 457-471.

13- Ghahramani, S., Hedjazi, S., Izadyar, S., Fischer, S. and Abdulkhani, A. (2022) Effect of cold caustic extraction on the properties of lignocellulosic nanocrystals (LCNCs) and lignocellulosic nanofibriles (LCNFs) produced from monoethanolamine (MEA) pulp of bagasse. Forest and Wood Products, Volume 75, No. 3: 281-293.

14- Hasanjanzadeh, H., Hedjazi, S., Hamzeh, Y. and Abdulkhani, A. (2022) The potential of replacing the starch with soda and formacell lignins in surface sizing and evaluation of physical and mechanical properties of produced liner papers. Iranian Journal of Wood and Paper Industries, Vol. 12, No. 4: 453-464.

15- Allahdady, M., Abdulkhani, A. and Hedjazi, S. (2022) Synthesis and characterization of aminated Lignin-based Hydrogel. Iranian Journal of Wood and Paper Industries, Vol. 12, No. 4: 551-560.

16- Babaei, B., Jamalirad, L., Vaziri, V. and Hedjazi, S. (2021) Investigation on the functional properties of wood-plastic composite prepared from black liquor powder obtained from alkali sulfite-anthraquinone (AS-AQ) pulping process with wheat straw. Forest and Wood Products, Volume 74, No. 2: 247-260.

17- Sazmand, S.S., Hamzeh, Y., Hedjazi, S. and Rudi, H.M. (2021) Optimizing the brightness and mechanical strength of tissue paper made of deinked pulp using

isolated soy protein and chitosan by using response surface methodology. Forest and Wood Products, Volume 73, No. 4: 491-502.

18- Barzegar, Sh., Hamzeh, Y., Hedjazi, S., and Izadyar, S. (2020) In-situ loading of calcium silicate in bleached bagasse fibers and its effect on pulp and paper properties. Iranian Journal of Wood and Paper Science Research Vol. 35 No. 3: 246-258.

19- Moradian Gilan, K., Hedjazi, S., Abdolkhani, A., and Sixta, H. (2019) The effect of hot water and alkaline pre-extractions on properties of bagasse pulps produced by monoethanolamine-AQ process. Iranian Journal of Wood and Paper Science Research Vol. 34 No. 3: 409-423.

20- Shokri, Sh., Hedjazi, S., Abdolkhani, A., and Sixta, H. (2019) Investigation on pulp production using γ-valerolactone organosolv process from birch wood. Iranian Journal of Wood and Paper Industries, Vol. 10, No. 3: 429-443.

21- Seyednaseredn, M., Hedjazi, S., and Hamzeh, Y. (2019) The influence of hot water pre-extraction of wheat straw hemicelluloses on monoethanolamine-AQ and soda-AQ pulp properties. Iranian Journal of Wood and Paper Industries, Vol. 10, No. 3: 361-372.

22- Khalili G.R.K., Abdolkhani, A., and Hedjazi, S. (2019) Producing and evaluation of properties of low sensitive nitrocellulose with acetylation method. . Iranian Journal of Wood and Paper Industries, Vol. 10, No. 2: 175-187.

23- Khorasani, Z., Abdolkhani, A., Hamzeh, Y., Momenbeik, F., and Hedjazi, S. (2019) Extraction of lignin with lignoboost process and production of water-soluble sulfonated derivatives from lignin of bagasse soda black liquor. Iranian Journal of Wood and Paper Industries, Vol. 10, No. 2: 237-247.

24- Akbari Amri, M., Hedjazi, S., and Ahmadi, M. (2019) Evaluation of the pulp properties produced from rice straw by monoethanolamine and potassium sulfite combined processes. Iranian Journal of Wood and Paper Industries, Vol. 10, No. 1: 77-87.

25- Rahimi, A., Hamzeh, Y., Abdolkhani, A., and Hedjazi, S. (2019) Production and characterization of lignocellulosic aerogel from rice straw. Iranian Journal of Wood and Paper Science Research Vol. 34 No. 1: 124-133.

26- Moradian Gilan, K., Hedjazi, S., Abdolkhani, A., and Sixta, H. (2019) Using of xylanase and cold soda extraction to remove hemicellulose from bagasse bleached pulp for dissolving pulp production. Iranian Journal of Wood and Paper Industries, Vol. 10, No. 1: 1-9.

27- Mohammadi Yanghagh, N., Hedjazi, S., Abdolkhani, A. and Hamzeh, Y. (2019) Investigation on the influence of alkaline pre-extraction of barley straw on soda and monoethanolamine pulps properties. . Iranian Journal of Wood and Paper Industries, Vol. 9, No. 4: 485-494.

28- Heshmati, S., Hedjazi, S., Hamzeh, Y. and Heshmati, S. (2019) Comparative Study of Pulp Characteristics from Maple (*Acer velutinum*) wood produced by Soda and Monoethanolamine Process with Anthraquinone. Forest and Wood Products, Volume 71, No. 4: 325-334.

29- Hedjazi, S., Hajipour, H., Abdulkhani, A., Hamzeh, Y. and Jamalirad, L. (2018) Comparing lignin derived from black liquors of alkaline sulfite-AQ, soda-AQ and kraft processes as a filler-extender in the poplar plywood. Iranian Journal of Wood and Paper Industries, Vol. 9, No. 3: 349-358.

30- Naroui, S., Jamalirad, L., Aminian, H. and Hedjazi S. (2018) The properties of poly lactic acid green composites reinforced by tobacco stalk flour. Forest and Wood Products, Volume 71, No. 3: 231-241.

31- Rahimi, A., Hamzeh, Y., Abdolkhani, A., Hedjazi, S. and Izadyar S. (2018) The use of lignocellulosic waste of rice straw for textile dyes adsorption. Iranian Journal of Wood and Paper Industries, Vol. 9, No. 3: 397-409.

32- Ghasemi, B., Jamalirad, L., Faraji, F. and Hedjazi S. (2018) Evaluating the composite properties made of sunflower stem flour and natural poly lactic acid (PLA) polymer. Iranian Journal of Wood and Paper Science Research Vol. 33 No. 3: 391-401.

33- Karimi, A., Jamalirad, L., Aminian, H. and Hedjazi S. (2018) The effect of using alkali sulfit-anthraquinone (AS-AQ) black liquor powder as filler of urea formaldehyde resin on functional properties of plywood. Iranian Journal of Wood and Paper Industries, Vol. 9, No. 3: 337-347.

34- Hedjazi, S., Mohammadi Shirkolaee, J. and Ahmadi, M. (2018) The pulp producing with monoethanolamine process from barely straw and ECF bleaching of obtained pulp. Forest and Wood Products, Volume 70, No. 4: 691-700.

35- Jamalirad, L., Kor, F., Faraji, F. and Hedjazi S. (2018) Evaluation the physical and mechanical properties of the boards manufactured by mixture of wheat straw and tobacco stalk. Iranian Journal of Wood and Paper Science Research Vol. 32 No. 4: 576-584.

36- Hosseini, S.B., Hedjazi, S., Jamalirad, L., Fatahi Amin, M. and Izadyar, S. (2017) Comparatiive investigation of treated bagasse and rice straw on physical and and mecanical properties. Iranian Journal of Wood and Paper Industries, Vol. 8, No. 3: 453-469.

37- Allahdady, M., Hedjazi, S., Jonoobi, M., Abdulkhani, A. and Jamirad, L. (2017) Investigation on mechanical-thermal properties of green composite produced from polylactic acid and bagasse pulp fibers. Forest and Wood Products, Volume 70, No. 2: 333-342.

38- Ghahramani, S., Hedjazi, S. and Mahdavi, S. (2017) Development of poplar Kraft pulp strengths with cellulose nano fiber of rice straw. Forest and Wood Products, Volume 70, 165 No. 1: 157-165.

39- Ahmadi,M., Hedjazi, S. and Salehi, K. (2017) Effect of beating time on the properties of soda and monoethanolamine pulp from wheat straw. Iranian Journal of Wood and Paper Science Research Vol. 32 No. (1): 94-105.

40- Aliniyay Lakani, S., Hedjazi, S., Abdulkhani, A. and Saake, B. (2017) Study of chemical components and bioactive properties of knot wood extractives from four endemic species of hyrcanian forests. Iranian Journal of Wood and Paper Industries, Vol. 8, No. 1: 53-66.

41- Allahdady, M., Hedjazi, S., Jonoobi, M., Abdulkhani, A. and Jamirad, L. (2017) Biodegradation behaviors and color change of composites based on type of bagasse pulp//polylactic acid. Iranian Journal of Wood and Paper Industries, Vol. 8, No. 1:1-12.

42- Mohammadi yanghagh, N., Hedjazi, S., Abdolkhani, A. and Hamzeh, Y. (2016) Hot water pre-extraction of Barley straw and its effect on soda and monoethanolamine pulps properties. Forest and Wood Products, Volume 69, No 3: 535-549.

43- Jalalvand., S, Kermanian, H., Ramezani, O., Rasooli garmaroudi, E. and Hedjazi, S. (2016) The influence of pH of sodium Hypochlorite bleaching on linter dissolving pulp properties. Forest and Wood Products, Volume 69, No. 2: 387-396.

44- Sukhtesaraie, A., Hedjazi, S., Jamalirad, L., Ahmadi, A. and Hosseini, B. (2016) Investigation on pulp –plastic composite properties produced form bagasse with different pulping processes, Forest and Wood Products, Volume 69, No 1: 133-145.

45- Barzali, S., Jamalirad, L., Faraji, F. and Hedjazi, S. (2016) Urea-f ormaldehyde resin reinforced silk cocoon, Iranian Journal of Wood and Paper Science Research Vol. 31 No. 3: 500-509.

46- Sukhtesaraie, A., Hedjazi, S., Jamalirad, L., Ahmadi, A. and Hosseini, B. (2016) The study of pulp-polypropylene biocomposites properties produced from non-extracted and hot water pre-extracted Bagasse, Iranian Journal of Wood and Paper Science Research Vol. 31 No. (1): 78-91.

47- Biazyat, A., Jamalirad, L., Aminian, H., Hedjazi, S. (2016) The effect of using palm wood flour in the manufacture of polypropylene-based wood-plastic composite, Iranian Journal of Wood and Paper Science Research Vol. 31 No. (1): 30-39.

48- Allahdady, M., Hedjazi, S., Jonoobi, M., Abdulkhani, A. and Jamirad, L. (2016) Effect of bagasse chemical pulping and coupling agent on the physical mechanical properties of composites based on bagasse pulp//Low density polyethylene. Iranian Journal of Wood and Paper Industries, Vol. 7, No. 3: 349-362.

49- Ahmadi, M., Hedjazi, S. Saake, B., Kordsachia, O. and Yousefi, H. (2016) The beatability of wheat straw soda and monoethanolamine pulps, Iranian Journal of Wood and Paper Industries, Vol. 7, No. 2: 155-166.

50- Alizadeh, P., Abdulkhani, A., Hedjazi, S. and Zabihzadeh S. M. (2016) The comparative investigation of soda, soda-AQ and monoethanolamin pulps from soya stalks. Forest and Wood Products, Volume 68, No 4: 887-902.

51- Ghahramani, S., Hedjazi, S. and Mahdavi, S. (2016) Evaluating the addition of cellulose nano fibers to reinforce of high yield kraft pulp produced from P.deltoides clone 69-55 wood. Iranian Journal of Wood and Paper Science Research Vol. 30 No. 4: 606-617.

52- Barzali, S., Jamalirad, L., Faraji, F. and Hedjazi, S. (2015) Using cellulose nanofiber as filler of urea formaldehyde resin in plywood manufacture, Iranain Journal of Wood and Paper Industries, Vol. 6, No. 2: 227-237

53- Gholizadeh, M., Jamalirad, L., Aminian, H. A. and Hedjazi S. (2015) The investigation on mechanical properties of polypropylene composite reinforced with tobacco stalke flour, Forest and Wood Products, Volume 68, No 2: 261-272

54- Shiralizadeh, F., Hedjazi, S. and Ahmadi, M. (2015) Evaluation of pulp properties produced from rice straw by combination the monoethanolamine and potassium hydroxide, Iranian Journal of Wood and Paper Science Research Vol. 30 No. 1: 46-59.

55- Ghahramani, S., Hedjazi, S. and Mahdavi, S. (2015) The evaluation of deltoeides poplar kraft pulp Properties for packaging purposes, Journal of scientific and promotion of packaging science and technology Vol. 6: No. 23: 14-26.

56- Kalagar, M., Khademieslam, H.A. and Hedjazi, S. (2015) Investigation of Mechanical and Morphological properties of silane treated rice straw flour/ polypropylene composite, Forest and Wood Products, Volume 67, No 4: 697-707.

57- Abdolkhani, A., Hosseinzadeh, J. and Hedjazi, S. (2014) The investigation on nanocomposite properties prepared from polylactic acid reinforced with cellulosic nano fiber, Forest and Wood Products, Volume 67, No 2: 271-282.

58- Hasanjanzadeh, H., Hedjazi, S., Yousefi, H., Mahdavi, S. and Abdolkhani, A. (2014) Influence of Cellulose nano fiber and cationic starch on rice straw soda-AQ pulp properties, Forest and Wood Products, Volume 67, No 1: 105-117

59- Hamzeh, Y., Abyaz, A., Abdolkahni, A., Hedjazi, S. and Izadyar, S. (2014) Effect of Diluted Acid Pre--Extraction on Soda Pulping of Bagasse, Iranian Journal of Wood and Paper Industries Vol. 5 No.1: 119-128.

60- Hasanjanzadeh, H., Hedjazi, S. and Mahdavi, S. (2014) The effect of polyelectrolyte on rice straw soda-AQ pulp drainage and of rice straw, Iranian Journal of Wood and Paper Science Research Vol. 29 No. 1: 170-181.

61- Hasanjanzadeh, H., Hedjazi, S. and Jamalirad, L. (2013) Study of the effect of alkaline pre- extraction of hemicelluloses on pulp properties prepared with soda-AQ process from rice straw, Forest and Wood Products, Volume 66, No 4: 493-506.

62- Abyaz, A., Hamzeh, Y., Abdolkahni, A. and Hedjazi, S. (2013) Investigation on the effects of pre-extraction on bagasse pulping and papermaking properties in a biorefinery system, Forest and Wood Products, Volume 66, No 2: 225-232.

63- Abdolkahni, A., Hamzeh, Y., Hedjazi, S. and Karimi A. N. (2012) The determination of deltoids poplar lignin non-condensed structures using DFRC methods, Forest and Wood Products, Volume 65, No 3 : 327-338

64- Abdolkhani, A., Mirshokraie, S. A., Hamzeh, H., Hedjazi, S. and Nouri, A. (2012) Elucidation of chemical structure of wood lignin dissolving in 1-butyl-3-metylimidizolium chloride ionic liquid, Iranian Journal of Polymer Science and Technology, Volume 24, No 4: 279-289.

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66- Kamareie, M., Hamzeh, Y., Mahdavi, S., Azadfallah, M., Hedjazi, S., Najafi, S.M.H., Abdolkhani, A. and Ramezanian, F. (2011) Influence of surfactants on

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2- Hedjazi, S., Jamalirad, L. (2021) Biorefineries; The infrastructures for the production of biofuels, biomaterials and bioenergy, 1st International conference on Architecture, Civil engineering, Environment and Agriculture.

3- Hedjazi, S., Seyednaseredin, M. (2021) Pre-extraction of wheat straw hemicelluloses with Acid on its effect on monoethanolamine-AQ and soda-AQ pulp properties, 1st International conference on Architecture, Civil engineering, Environment and Agriculture.

4- Hedjazi, S. (2018) Alkaline Sulfite Anthraquinone (AS-AQ) and Monoethanolamine (MEA) Processes; A Progress in Non-Woody Plants Pulping, The international forest products congress (ORENKO).

5- **Hedjazi, S., Hosseini, S.B., Jamalirad, L. (2018) The Potential of Different Pulping Processes in Production of Pulp-Plastic Composites (PPC) From Bagasse and Rice Straw, The international forest products congress(ORENKO).**

6- Ghahremani, S., Hedjazi, S., 2015 , Evaluate the capabilities of nano-cellulose as an additive in the pulp, paper and packaging industris, International conference on sustainable development, strategies and challenges with a focus on Agriculture, Natural Resources, Environment and Tourism.

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2- **Hedjazi, S., Jamalirad, L., 2021, Potential of two fast-growing species of Ailan (Ailanthus altissima) and bitter olive (Melia azedarach) for agroforestry in Iran and their practical wood characteristics, 1st National conference on industrial potentials of fast-growing wood species (IPFW 2021)**

3- **Ghahremani, S., Hedjazi, S., Mahdavi, S., 2021, Production and evaluation of kraft pulp, high-yield kraft and NSSC deltoid poplar for packaging industry, 1st National conference on industrial potentials of fast-growing wood species (IPFW 2021)**

4- **Jamalirad, L., Hajipourkapourchali, H., Hedjazi, S., Abdolkhani, A., Hamzeh, Y., 2021, Extraction of Lignin from Black Liquor obtained from various pulping Processes and its use in Plywood Manufacture with Poplar Wood Layers (Populus nigra), 1st National conference on industrial potentials of fast-growing wood species (IPFW 2021)**

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6- **Ebrahimi, SS., Abdolkhani, A., Hedjazi, S., 2018, Ethyl cellulose ; The most important biofilm, 4th international conference new findings in agriculture, natural resources and environmental science.**

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17- **Gholizadeh, M., Jamalirad, L., Hedjazi S., Aminian, H. A. 2015, The influence of nano clay filler content on physical properties of polypropylene composite-tobacco stalke fibers, 1st national coneference on wood and lignocellulosic products.**

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28- Hedjazi S., Jamalirad, L., 2013, Biomass: The strategical option for sustainable development and security of material and energy streams in the future world. The 1st national conference on natural resources management.

29- Allahdadi, M., Hedjazi, S., Abginehchi, Z., 2013, Using of green composites: the new approach for overcoming of environmental problems. The 1st conference on environment, energy and biological defense.

30- Gholizadeh, M., Jamalirad, L., Hedjazi S., Aminian, H. A., 2013, The potential of using of tobacco stalk from Golestan province in wood plastic manufacture. The 1st national conference on natural resources management.

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Book

1- **Abdulkhani, A., Bagheri, SH., Hosseinzadeh, J., Hedjazi, S. and Sun, F. (2025) Functionalization of Lignin by Sulfomethylation, Book chapter in Handbook of Lignin, Springer Nature Singapore, 1-25**

Master and Ph.D. Theses Supervised

- Master Theses:

1- **Production of unbleached pulp and paper from rice straw using carbonate process, Student name: Mohammad Naghi Pakzad, Defenced: 01/03/2025.**

2- **Production of packing paper pulp and fractionation of rapeseed stalk using glycerol as a green organic solvent to realize the concept of whole crop biorefinery, Student name: Bahareh Jafar, Defenced: 2022-02-16.**

3- **Preparation of reinforced tannin-furfural resin from the bark of woody lignocellulosic sources boosted with polyethyleneimine, Student name: Ali Maleki, Defenced: 2022-02-06.**

4- **Feasibility study of using lignocellulosic residue of some of the most important annual agricultural plants in Iran's cellulose industries, Student name: Heidar Heidari Emamverdikhan, Defenced: 2021-09-22.**

5- **Investigation on the physical and mechanical properties of packaging papers produced by mixing wheat straw sodium carbonate pulp with OCC pulp, Student name: Samaneh Derakhshi , Defenced: 2021-03-10.**

6- **Investigating the production of chemical and semi-chemical pulp using sodium carbonate (soda ash process) from wheat straw, Student name: Zeynab Bashardoust , Defenced: 2021-03-10.**

7- **Production of bioplastic by esterification of lignin with tall oil, Student name: Amin Rahmani , Defenced: 2021-03-08.**

8- **Preparation of alpha cellulose from wheat straw using organic solvent process based on formic acid, Student name: Omolbanin Rashidi , Defenced: 2020-02-17.**

9- **Deposition of nano calcium silicate inside bleached bagasse fibers and its effect on pulp and paper properties, Student name: Shayan Barzegar , Defenced: 2019-09-18.**

10- **Production of Ethyl cellulose from cotton linter, Student name: Sedigheh Ebrahimi Darkhaneh, Defenced: 20١٨-0٩-١٧.**

11- **Purification of bagasse soda lignin treated with ozone using organic solvents, Student name: Zeynab Ghorbani , Defenced: 20١٨-0٩-١٧.**

12- **Preparation of nano system to increase wet, dry and antimicrobial resistance of tissue with (nano) chitosan, glutaraldehyde and soya, Student name: Seyed Sajad Sazmand , Defenced: 2018-09-17.**

13- A comparative study of the characteristics of soda anthraquinone and monoethanolamine pulps from maple wood (*Acer velutinum*), Student name: Sima Heshmati , Defenced: 2018-02-12.

14- Evaluation of the characteristics of alkaline sulfite – AQ pulp produced from maple wood wood (*Acer velutinum*), Student name: Fereshteh Mahmoudi Rouhani , Defenced: 2018-02-06.

15- Investigation on the possibility of producing hydroxymethyl furfural (HMF) from sugarcane bagasse, Student name: Meraj Siahrang , Defenced: 2018-03-06.

16- Production of lignocellulosic aerogel from rice straw lignocellulosic waste, Student name: Atefeh Rahimi , Defenced: 2017-09-18.

17- Investigation on the amount of production, imports, exports and per capita consumption of all types of paper and cardboard in Iran during the last 10 years, Student name: Naser Kardoust , Defenced: 2017-09-17.

18- Evaluation of the effect of acidic and hot water pre-extraction on the monoethanolamine pulp from wheat straw, Student name: Masoumeh Seyednaseredin , Defenced: 2016-09-19.

19- Evaluation of the properties of alkaline sulfite anthraquinone pulp produced from wheat straw pre-extracted by hot water and dilute acid, Student name: Hamidreza Mousivand , Defenced: 2016-09-19.

20- Preparation of hemicellulose biocomposite films from sugarcane bagasse reinforced by nano cellulose and oxidized carboxymethyl cellulose, Student name: Aysan Najd Mazhar , Defenced: 2016-09-19.

21- Evaluation of the potential of the black liquor of the alkaline sulfite-AQ process and its lignin as a filler extender, Student name: Hedyeh Hajipour Kapourchali , Defenced: 2016-02-16.

22- Investigation on the characteristics of alkaline sulfite – anthraquinone pulp from Eastern cottonwood (*Populus deltoids*), Student name: Hedyeh Hajipour Kapourchali , Defenced: 2016-02-15.

23- Investigation on the physical-mechanical properties of composites produced from bagasse pulp with polylactic acid using twin screw extruder, Student name: Maryam Allahdady , Defenced: 2015-02-17.

24- Evaluation of the physical and mechanical properties of the bio-composites of pulp-high density polyethylene from bagasse, Student name: Seyed Behnam Hosseini , Defenced: 2014-02-12.

25- Reinforcement of high yield kraft and NSSC pulps from poplar with cellulose nanofibers to produce nano paper for packaging purposes, Student name: Saleh Ghahramani , Defenced: 2014-02-12.

26- Comparative study of alpha cellulose pulp bleaching with sodium hypochlorite and calcium hypochlorite in Parchin chemical industries, Student name: Sahar Jalalvand, Defenced: 2014-01-22.

27- Pulp production using monoethanolamine and ethylene glycol as organic solvents from kenaf stalks and bleaching of the resulting pulp with ECF sequence, Student name: Masoud Ghahramani Habashi, Defenced: 2013-09-18.

28- Investigation on the possibility of pulp production from soybean stalk, Student name: Peyman Alizadeh, Defenced: 2013-09-17.

29- Evaluation of the physical and mechanical properties of bionanocomposites of pulp-polypropylene from raw and pre-extracted bagasse with hot water, Student name: Alireza Sukhtehsaraee, Defenced: 2013-09-16.

30- Investigation on the physical and mechanical properties of polyethylene composites reinforced with mechanical and chemical pulps of rice straw, Student name: Mina Fatahi Amin, Defenced: 2013-02-17.

31- Production of bioethanol from bagasse and waste paper using environmentally friendly processes, Student name: Mohammad Aghuz Sheikhi, Defenced: 2013-02-16.

32- Preparing and evaluating the properties of nano paper and paper reinforced with cellulose nano fibers from rice straw in an integrated biorefinery, Student name: Hadi Hasanjanzadeh, Defenced: 2013-02-13.

33- Investigation on the potential of barley straw in an integrated lignocellulosic biorefinery, Student name: Nasibeh Mohammadi Yanghagh, Defenced: 2012-02-18.

34- Investigation on the production of pulp using monoethanolamine in pure form (MEA) and in combination with potassium hydroxide (KOH) from barley straw and ECF bleaching of the resulting pulps, Student name: Jamaledin Mohammadi Shirkolaee, Defenced: 2012-02-15.

35- The effects of pre-extraction on the pulp and papermaking properties of bagasse in a biorefinery system, Student name: Ali Abyaz, Defenced: 2011-09-17.

36- The effect of microwave and steaming pretreatments on the changes of elements affecting the physical and chemical properties of fir wood after drying, Student name Hadi Dashti, Defenced: 2011-07-07.

37- Production of pulp with the environmentally friendly method of monoethanolamine-potassium hydroxide-anthraquinone (MEA/KOH/AQ) from rapeseed wastes and ECF bleaching of the resulting pulp, Student name: Neda Mehnipour Narab, Defenced: 2011-02-01.

38- Investigation on the market of corrugated cardboard and papers related to it in Iran, Student name: Rouhallah Eisapour, Defenced: 2011-01-24.

39- Investigation on the production of pulp by the monoethanolamine method (MEA) from rice straw and ECF bleaching of the resulting pulp, Student name: Amirhossein Heidari Adli , Defenced: 2010-09-22.

40- The effect of surfactants on the properties of CMP pulp obtained from poplar and eucalyptus, Student name: Masoud Kamarehi , Defenced: 2010-02-08.

- Ph.D. Theses:

1- **Investigation on the effect of soda lignin modification and its use as a surface sizing agent on the strength, surface and printability characteristics of the test liner, Student name: Omid Ghaffarzadeh , Defenced: 2023-02-15.**

2- **The effect of different pulping processes, cold alkaline extraction (CCE) and bleaching on the properties of cellulose nanowhiskers (CNWs) produced from bagasse, Student name: Saleh Ghahramani , Defenced: 2023-01-04.**

3- **The effect of replacing starch with bagasse soda and formacel lignins in the surface sizing section on the physical and mechanical characteristics of the produced packaging papers, Student name: Hadi Hasanjanzadeh , Defenced: 2022-02-19.**

4- **Preparation of hydrogels based on functionalized lignin to evaluate the absorption of environmental pollutants, Student name: Maryam Allahdady , Defenced: 2022-02-14.**

5- **Evaluation of a biorefinery based on the organic solvent process of gamma valerolactone (GVL) for the preparation of dissolving pulp from birch wood, Student name: Shokoufeh Shokri Sarvineh Baghi, Defenced: 2019-09-08.**

6- **The possibility of producing dissolving pulp (alpha cellulose) from bagasse soda pulp, Student name: Kajal Moradian, Defenced: 2018-07-04.**

7- **Identification and evaluation of the bioactive properties of the extractives of four endemic species of *Pterocarya fraxinifolia*, *Gleditsia caspica, Parrotia persica* and *Alnus subcordata* of the Hyrcanian forests, Student name: Sahba Aliniay Lakani , Defenced: 2016-09-18.**

8- **The effect of chemical compounds of pulp and mechanical pretreatments on production energy consumption and characteristics of cellulose nanofibers (CNF) obtained from wheat straw, Student name: Mohammad Ahmadi , Defenced: 2015-09-20.**