



Personal Information

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Education

Ph.D 2006

Process Engineering - pulp and paper processes chemistry
Grenoble national polytechnique, Grenoble, France.

M.Sc.

Wood and Paper Science and Technology
Tarbiat Modares University, Tehran, Iran.

Research interests

- Lignocellulosic-based polymers characterization and applications
- Lignocellulosic nanotechnology
- Nanocelluloses preparation and applications
- Chemical processing of wood and lignocellulosics
- Cellulose chemistry and applications
- Lignin chemistry and applications

Teaching courses

M.Sc.

Lignocellulosic Materials Biorefinery

Emerging Technologies in Wood and Cellulose Products Industries

Advanced Lignocellulosic Materials Chemistry

Ph.D.

Nanocelluloses

Lignocellulosic-based Polymers

National patents

- Composite panel with using OCC recycling process wastes without adhesive
- Cellulose derivatives from paper mill waste fines
- Bio-nanocomposite films from agar/cellulose for food packaging
- High viscosity polyanionic cellulose for drilling mud composition
- Super absorbent biopolymer as replacing xanthan gum in drilling mud composition

Executive activities

- Head of Wood and Paper Department from 2008 to 2010.
- Research Deputy of Natural Resources and Marine Sciences Faculty from 2008 to 2013.
- Head of Wood and Paper Department from 2016 to 2018.
- Administrative Deputy of Natural Resources and Marine Sciences Faculty from 2019 to 2021.

Publications

	TITLE
2023	Effects of nanoclay modification with aminopropyltriethoxysilane (APTES) on the performance of urea–formaldehyde resin adhesives LA Khorramabadi, R Behrooz, S Kazemi BioResources 18 (3), 5417
2023	Preparation and characterisation of electromagnetic shielding medium-density fiberboard using Iron oxide nanoparticles M Pourjafar, R Behrooz, A Shalbafan, V Nayyeri

	TITLE
	Wood Material Science & Engineering 18 (4), 1360-1371
2023	Reduction of formaldehyde emission from medium density fiberboard using nanoclay modified with 3-aminopropyltriethoxysilane and L-Lysine as LA Khorramabadi, R Behrooz, SK Najafi International Journal of Adhesion and Adhesives, 103426
2023	The effect of lignin-based polyols on the properties of polyurethane coatings FH Khorshidi, SK Najafi, F Najafi, A Pizzi, D Sandberg, R Behrooz Green Materials 40 (XXXX), 1-12
2023	Effect of Amine Type on Lignin Modification to Evaluate Its Reactivity in Polyol Construction for Non-Isocyanate Polyurethanes (NIPU). SK Najafi, F Najafi, A Pizzi, FH Khorshidi, R Behrooz Journal of Renewable Materials 11 (5)
2023	Using spray dried nanofibrillated Cellulose as an alternative to upgrading its effect in PLA nanocomposite S Ghasemi, R Behrooz, M Rahimi International Journal of Nano Dimension 14 (2), 167-177
2023	Preparation of Microcrystalline Cellulose Using Cotton Yarn Waste from the Textile Industry and Evaluation of its Characteristics ZK Karchangi, R Behrooz BioResources 18 (1), 1115-1127
2022	Preparation and characterisation of electromagnetic shielding medium-density fiberboard using Iron oxide nanoparticles M Pourjafar, R Behrooz, A Shalbafan, V Nayyeri Wood Material Science & Engineering, 1-12
2022	Insights into activation of dissolving pulp preceding cellulose acetylation E Rasooly-Garmaroody, S Ebadi, O Ramezani, R Behrooz BioResources 17 (2), 2157
2022	Improved Wood-Bond Strengths Using Soy and Canola Flours with pMDI and PAE M Barzegar, LF Lorenz, R Behrooz, CR Frihart Polymers 14 (7), 1272
2022	Medium density fiberboard (MDF) with efficient electromagnetic shielding: Preparation and evaluation M Pourjafar, R Behrooz, V Nayyeri, A Shalbafan BioResources 17 (1), 1518-1532
2022	Preparation of Polyurethane Adhesive from Wood Sawdust polyol: Application of Response Surface Methodology for Optimization of Catalyst and S Daneshvar, R Behrooz, SK Najafi, G Mir, M Sadeghi Biointerface Res. Appl. Chem 12, 1870-1883
2021	PERFORMANCE OF UREA/NaOH AS A GREEN SOLVENT IN DISSOLVING RECYCLED CELLULOSIC FIBER FINES RESIDUES S Bagheri, M Rahmaninia, R Behrooz CELLULOSE CHEMISTRY AND TECHNOLOGY 55 (9-10), 971-979
2021	Production of Urea Slow-release fertilizer with cellulose from wastes (paper, palm and pistachios) and investigation of their structural, chemical and N Salari Ardsiri, M Hejazi-Mehrizi, H Naghavi, R Behrooz, M Fekri Journal of Agricultural Engineering Soil Science and Agricultural ...
2021	Evaluation of structural, physical and chemical properties of cellulose and nanocrystalline cellulose extracted from pruning palm trees wastes N Salari, M Hejazi-Mehrizi, R Behrooz, H Naghavii, M Saffari, M Fekri Iranian Journal of Wood and Paper Industries 12 (1), 95-107
2021	Production of urea slow-release fertilizer with extracted cellulose from some wastes (paper, palm and pistachios) and investigation of their struc

	TITLE
	NB Salari, M Hejazi-Mehrizi, H Naghavii, R Behrooz, M Fekri Agricultural Engineering (Scientific Journal of Agriculture) 44, 2
2020	Comparison of canola and soy flour with added isocyanate as wood adhesives M Barzegar, R Behrooz, HR Mansouri, SK Najafi, LF Lorenz, CR Frihart Journal of the American Oil Chemists Society 97 (12), 1371-1383
2020	Lignocellulosic hydrogel from recycled old corrugated container resources using ionic liquid as a green solvent SMH Sangtarashani, M Rahmaninia, R Behrooz, A Khosravani Journal of Environmental Management 270, 110853
2020	Liquefaction of Lignocellulosic Wastes by Using Ethylene Carbonate Solvent: The Effect of Process Variables on Properties S Daneshvar, R Behrooz, S Kazemi Najafi, G Mir Mohamad Sadeghi Nashrieh Shimi va Mohandesi Shimi Iran 39 (1), 255-266
2020	Fiber fines for fabricating Lignocellulose Films and the effect of lignin M Pourjafar, A Khosravani, R Behrooz BioResources 15 (2), 4417-4433
2020	Bacterial cellulose as a carbon nano-fiber precursor: Enhancement of thermal stability and electrical conductivity F Rezaei, R Behrooz, S Arbab, EN Sabet BioResources 15 (2), 3408-3426
2020	The effect of kaolinite on the properties of lignocellulose superabsorbent from old corrugated container fiber fines V Nejati, A Khosravani, R Behrooz Iranian Journal of Wood and Paper Industries 10 (4), 531-542
2019	Formaldehyde emission from PVC–wood composites containing MDF sanding dust M Ansari Chaharsoughi, S Kazemi Najafi, R Behrooz Journal of Vinyl and Additive Technology 25 (2), 159-164
2019	Application of surface chemical functionalized cellulose nanocrystals to improve the performance of UF adhesives used in wood based composites H Khanjanzadeh, R Behrooz, N Bahramifar, S Pinski, W Gindl-Altmutter Carbohydrate polymers 206, 11-20
2019	Characterization of polyurethane wood adhesive prepared from liquefied sawdust by ethylene carbonate S Daneshvar, R Behrooz, SK Najafi, GMM Sadeghi BioResources 14 (1), 796-815
2018	Preparation of bio-polyols from lignocellulosic waste by liquefaction N Rastegarfar, R Behrooz, M Barikani Iranian Journal of Wood and Paper Industries 9 (3), 313-321
2018	Development of nanocellulose-reinforced PLA nanocomposite by using maleated PLA (PLA-g-MA) S Ghasemi, R Behrooz, I Ghasemi, RS Yassar, F Long Journal of Thermoplastic Composite Materials 31 (8), 1090-1101
2018	Characterization of polyurethane foams prepared from liquefied sawdust by crude glycerol and polyethylene glycol N Rastegarfar, R Behrooz, M Barikani Journal of Polymer Research 25, 1-8
2018	Corrigendum to “Surface chemical functionalization of cellulose nanocrystals by 3-aminopropyltriethoxysilane”[Int. J. Biol. Macromol. 106 (2018) 112-118] H Khanjanzadeh, R Behrooz, N Bahramifar, W Gindl-Altmutter, M Bacher, ... International Journal of Biological Macromolecules 113

	TITLE
2018	Investigating the properties of maleated poly (lactic acid) and its effect on poly (lactic acid)/cellulose nanofiber composites S Ghasemi, R Behrooz, I Ghasemi Journal of Polymer Engineering 38 (4), 391-398
2018	Performance Evaluation of Modified Canola Flour Adhesive in Plywood Production M Barzegar, R Behrooz, H Mansouri, S Kazemi Najafi Iranian Journal of Wood and Paper Industries 8 (4), 631-643
2018	Surface chemical functionalization of cellulose nanocrystals by 3-aminopropyltriethoxysilane H Khanjanzadeh, R Behrooz, N Bahramifar, W Gindl-Altmutter, M Bacher, ... International journal of biological macromolecules 106, 1288-1296
2017	The Effect of Extracting Method on the Cellulose Nanofibers Characteristic and Its Application in Polylactic Acid (PLA) Matrix S Ghasemi, R Behrooz, I Ghasemi Journal of Bionanoscience 11 (6), 554-559
2017	Investigation of physical, mechanical properties and formaldehyde emission of medium density fiberboard manufactured from urea formaldehyde H Khanjanzadeh, R Behrooz, N Bahramifar, V Gindl-Altmutter Iranian Journal of Wood and Paper Industries 8 (2), 197-209
2017	Effect of relative humidity and temperature on formaldehyde emission from MDF subjected to load M Ebrahimi, S Kazemi Najafi, R Behrooz International Wood Products Journal 8 (3), 155-160
2017	The effect of Sulfuric acid and Maleic acid on characteristics of nano-cellulose produced from waste office paper F Yeganeh, R Behrooz, M Rahimi International Journal of Nano Dimension 8 (3), 206-215
2017	Influence of nanoclay on urea–glyoxalated lignin–formaldehyde resins for wood adhesive H Younesi-Kordkheili, S Kazemi Najafi, R Behrooz The Journal of Adhesion 93 (6), 431-443
2016	Influence of nanoclay on physiochemical, thermal and structural properties of urea formaldehyde resin H Younesi, S Najafi, R Behrooz Forest and Wood Products 69 (3), 561-570
2016	Sunflower stalk neutral sulfite semi-chemical pulp: an alternative fiber source for production of fluting paper H Rudi, H Resalati, RB Eshkiki, H Kermanian Journal of Cleaner Production 127, 562-566
2016	Extraction and characterization of nanocellulose structures from linter dissolving pulp using ultrafine grinder S Ghasemi, R Behrooz, I Ghasemi Journal of nanoscience and nanotechnology 16 (6), 5791-5797
2016	The comparison of nanocellulose/PLA nanocomposites elastic modulus obtained by nanoindentation and tensile test R Behrooz, S Ghasemi, R Shahbazian Yassar, I Ghasemi Modares Mechanical Engineering 15 (11), 81-87
2016	The effect of ECF bleaching on optical and mechanical properties of bagasse soda pulp. R Vaysi, R Behrooze, I Khaj-e-Ali Iranian journal of wood and paper science research 31 (2)
2015	Investigation Changes in Structure and Thermal Properties of Glyoxalated Soda and Kraft Lignins H Younesi Kordkheili, S Kazemi Najafi, R Behrooz, A Pizzi Forest and Wood Products 68 (1), 169-179

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2015	Characterization of physical, mechanical, and antibacterial properties of agar-cellulose bionanocomposite films incorporated with savory essential oils M Atef, M Rezaei, R Behrooz Food Hydrocolloids 45, 150-157
2015	Electrocoagulation treatment of black liquor from soda-AQ pulping of wheat straw N Rastegarfar, R Behrooz, N Bahramifar Environmental monitoring and assessment 187, 1-9
2015	Improving urea formaldehyde resin properties by glyoxalated soda bagasse lignin H Younesi-Kordkheili, S Kazemi-Najafi, RB Eshkiki, A Pizzi European Journal of Wood and Wood Products 73, 77-85
2015	The Effect of Using Anthraquinone on Hornbeam Neutral Sulfite Pulp Properties M ROOSTAEE, R BEHROOZ, S MAHDAVI JOURNAL OF WOOD AND FOREST SCIENCE AND TECHNOLOGY 22 (2), 189-205
2014	Nano Crystalline Cellulose as Modifier of Poly Lactic Acid Foams R Behrooz, R Miraky, I Ghasemi
2014	Preparation and characterization agar-based nanocomposite film reinforced by nanocrystalline cellulose M Atef, M Rezaei, R Behrooz International journal of biological macromolecules 70, 537-544
2014	Effects of Relative Humidity and Temperature on Creep Parameters of Medium Density Fiberboard (MDF) M Ebrahimi, S Kazemi, R Behrooz Forest and Wood Products 67 (2), 347-357
2013	Comparing physico-mechanical and thermal properties of alginate nanocomposite films reinforced with organic and/or inorganic nanofillers M Abdollahi, M Alboofetileh, M Rezaei, R Behrooz Food Hydrocolloids 32 (2), 416-424
2013	Elimination of phenol and color from pulping Black Liquor using electrocoagulation process N Rastegarfar, R Behrooz, N Bahramifar J Water and Wastewater 24 (86), 45-53
2013	Investigation of Electro coagulation Process on TSS and COD Removal from Effluent of the Paper Recycling Mill Using Al Electrodes H Hemmat Abadi, R Behrooz Iranian Journal of Wood and Paper Industries 3 (2), 53-64
2013	Reducing water sensitivity of alginate bio-nanocomposite film using cellulose nanoparticles M Abdollahi, M Alboofetileh, R Behrooz, M Rezaei, R Miraki International journal of biological macromolecules 54, 166-173
2012	The effect of urea pretreatment on the formaldehyde emission and properties of straw particleboard H Hematabadi, R Behrooz Journal of forestry research 23, 497-502
2012	Influence of pH and conductivity on properties of paper made of polyelectrolyte multilayered recycled fibers H Rudi, Y Hamzeh, G Ebrahimi, R Behrooz, MM Nazhad Industrial & engineering chemistry research 51 (34), 11054-11058
2012	Using industrial waste of old corrugating containers paper recycling mill in composite panels manufacturing HY Kordkheili, R Behrooz, M Jalilvand Journal of Reinforced Plastics and Composites 31 (12), 855-860

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2012	Comparative Effect of Acid Treatment and DTPA Chelating Agent on Optical Properties of Chemi-Mechanical Pulp Bleached by Hydrogen Peroxide S Ghasemi, R Behrooz Nashrieh Shimi va Mohandesi Shimi Iran 31 (1), 63-69
2012	The effect of degree of substitution of cationic starch on multi-layer formation of ionic starches in recycled fibers H Rudi, G Ebrahimi, Y Hamzeh, R Behrooz, MM Nazhad Iranian Journal of Polymer Science and Technology 25 (1), 11-18
2012	Effect of Chemical Reagents on Physical and Mechanical Properties of Wood Flour-Polypropylene Composites W Eee Forest and Wood Products 65 (1), 57-69
2012	The reduction of indoor air formaldehyde from wood based composites using urea treatment for building materials H Hematabadi, R Behrooz, A Shakibi, M Arabi Construction and Building Materials 28 (1), 743-746
2012	Mg(OH)₂-BASED HYDROGEN PEROXIDE BLEACHING OF CMP PULPS AT HIGH CONSISTENCY. R Behrooz, S Ghasemi, GA Atoii, P Fatehi BioResources 7 (1)
2012	Effect of anthraquinone on NSSC pupling of P. Deltoides. M Roostaei, R Behrooz, S Mahdavi Iranian Journal of Wood and Paper Science Research 26 (4), 622-633
2012	Physical Properties of Lignin Added Wood Flour-Polypropylene Composites: A Comparison of Direct and Solvent Mixing Techniques R Behrooz, HY Kordkheili, SK Najafi Asian Journal of Chemistry 24 (1), 157
2012	Investigation on the optimal dosage of hydrogen peroxide and sodium hydroxide to improve flotation deinking efficiency for mixed waste papers A Sadeghi, R Behrooz JOURNAL OF FOREST AND WOOD PRODUCTS (JFWP)(IRANIAN JOURNAL OF NATURAL ...
2012	Creep behavior of the composites made from waste materials of OCC recycling mills. HY Kordkheili, M Jalilvand, R Behrooz Iranian Journal of Wood and Paper Science Research 26 (4), 798-810
2011	Creep behavior of the composites made from creep behavior of the composites made from waste materials of OCC recycling mills H Unesi Kord Khalili, M Jalilvand, R Behroz Iranian Journal of Wood and Paper Science Research 26 (4), 798-810
2011	The Effect of Preheating Treatment and non-simultaneous Addition of Chemicals on the Efficiency of Hydrogen Peroxide Bleaching of Chemi-mechanical Pulp R Behrooz, S Ghasemi Iranian Journal of Wood and Paper Industries 1 (2), 27-36
2011	Effect of Lignin Mixing Method on Physical and Mechanical Properties of Wood Flour-Polypropylene Composites R Behrooz, H Younesi, S Kazemi Najafi Iranian Journal of Wood and Paper Industries 1 (2), 103-113
2011	Effect of cellulose characteristic and hydrolyze conditions on morphology and size of nanocrystal cellulose extracted from wheat straw M Rahimi, R Behrooz International Journal of Polymeric Materials 60 (8), 529-541
2011	The influence of alkalinity in oxygen delignification of Soda/AQ pulp from old corrugated container MA Azad Far, R Behroz, A Jahan-Latibari Iranian Journal of Wood and Paper Science Research 26 (2), 232-242

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2011	Turbidity and BOD removal of a paper recycling mill effluent by electro-coagulation technique R Behrooz, HH Abadi, B Mohebbi Desalination and Water Treatment 28 (1-3), 65-68
2011	The effect of consistency on the optical properties of hydrogen peroxide bleached CMP pulp. S Ghasemi, R Behrooz Iranian Journal of Wood and Paper Science Research 26 (2), 398-409
2011	A COMPARISON OF LIGNIN MIXING TECHNIQUES ON WATER ABSORPTION AND THICKNESS SWELLING OF WOOD-PLASTIC COMPOSITES R Behrooz, HY Kordkheili 第十六届木材, 纤维及制浆化学国际会议论文集 (第 II 卷)
2011	Use of Kraft lignin as compatibilizer in wood flour-polypropylene composites. R Behrooz, HY Kordkheili, SK Najafi Iranian Journal of Wood and Paper Science Research 26 (3), 454-465
2010	Impact of acid washing and chelation on Mg (OH) 2-based hydrogen peroxide bleaching of mixed hardwoods CMP at a high consistency S Ghasemi, RB Eshkiki, P Fatehi, Y Ni BioResources 5 (4), 2258-2267
2009	Upgrading Old Corrugated Containers (OCC) Fibers by Delignification Treatments MA Azadfar, R Behroz, A Jahan Latibari M. Sc. Thesis, Department of Tarbiat Modares University.(In Persian)
2008	Evaluation of chemical and mechanical pulp oxidability by the kappa number test R Behrooz-Eshkiki, D Lachenal, G Mortha 10th European Workshop on Lignocellulosics and Pulp, 270-273
2007	Advances in the quantitative titration of free phenolic groups in cellulosic pulps R Behrooz-Eshkiki, C Calais, D Lachenal, N Marlin, G Mortha, D Delmas 12th African Pulp and Paper Week, xx
2007	A new method for the titration of free phenolic groups in pulps R Behrooz Eshkiki, G Mortha, D Lachenal Walter de Gruyter 61 (3), 242-246
2006	A new fast and quantitative method for the titration of free phenolic groups in cellulosic pulps R Behrooz-Eshkiki, G Mortha, D Lachenal 9th European Workshop on Lignocellulosics and Pulp (EWLP), xx
	Radovan Despot, Marin Hasan, Christian Brischke, Christian Robert Welzbacher and Andreas Otto Rapp: Changes in physical, mechanical and chemical properties of wood-plastic composites during aging H Epmeier, M Johansson, R Kliger, M Westin, RB Eshkiki, G Mortha, ...
	Effect of lignin on the properties of wood-polypropylene composites R Behrooz, S Ghasemi, RS Yassar, I Ghasemi