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DESCRIPTION

*Industrial Crops and Products* is an International Journal publishing academic and industrial research on industrial (defined as non-food/non-feed) crops and products. Papers concern both crop-oriented and bio-based materials from crops-oriented research, and should be of interest to an international audience, hypothesis driven, and where comparisons are made statistics performed. The following are examples of research that fit within the scope of the journal.

The emphasis must be on plants. Non-plant research, for instance animal, algae, microorganisms, and medical oriented research are not within the scope of the journal. Non-food/non-feed products (bio-based materials) from specific crops. Food/feed uses can be mentioned, but the majority of data and emphasis in the Discussion must be on non-food/non-feed uses of plants and plant products. Cultural practices to improve production of industrial crops and products. Experiments should be run at least twice, whether performed in the field, greenhouse, growth chamber, and in tissue culture or micropropagation, to account for environmental variation and/or genotype x environment interactions. Germplasm development and breeding of industrial crops. New or alternative crops with potential industrial uses.

a) The manuscript should include an evaluation of the real potential to make a plant an industrial crop, not just information on plants gathered in natural habitats (many plants make products, but they will not become a crop). An economic analysis may be included as appropriate.

b) Industrial Crops and Products is a crop oriented journal; these can be field crops, horticultural crops, or forest crops, but they must be managed, not just collected natural stands. The focus should be on agricultural production as an end result. Plant products, tied to specific crops/plants, and their modification to meet new industrial uses. For instance, for nanoparticles, a direct link is required with an industrial crop or with the respective value-chain. Testing industrial uses of specific plant products. Processing research to improve recovery of specific plant products.

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AUDIENCE

Scientists in the areas of agronomy, crop protection, post-harvest and processing research, product testing and evaluation, distribution, marketing and economics.

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Starch; thermoplastic starch; polymers and monomers from renewable resources; cellulose fibbers and nanofibers

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Conversion of biomass into biofuels and other added-value products; Techno-economic and environmental issues related to the development of the biorefinery concept

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Non-Newtonian behaviour; rheology; viscoelasticity; yield stress; shear-thinning; shear-thickening; thixotropy; food processing; baking characteristics.

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rubber; plant physiology; biomass; biofuels; resins.

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Genomics; Molecular biology; Plant biotechnology; Proteomics; Secondary Metabolites; Tissue culture

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Crop breeding and genetics; Plant genetic resources conservation and management; Oilseed crops; New industrial crops

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Crops for biomass and biofuels; agronomy; improvement and processing

**D.A. Dierig**, Bridgestone Americas, Inc., Guayule Research Farm, Eloy, Arizona, United States
Oilseeds, plant genetic resources, new industrial crop breeding.
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Postharvest handling of crops; crop processing; oilseed processing; vegetable oil refining; plant oil characterization; seed protein characterization

M. Faisal, King Saud University, Riyadh, Saudi Arabia
Plant Biotechnology; in vitro morphogenesis, tissue culture, micropropagation, germplasm conservation, genetic transformation, molecular markers and environmental phytotoxicity of nanoparticles and bisphenols.

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Cellulose nanomaterials; Nanocomposites; Polymers; Characterization; Byproducts; Nanocellulose; Supramolecular; Uctional; Implantable materials; Biomaterials

A. Gandini, University of Aveiro, Aveiro, Portugal
Chemistry of vegetal biomass; furan and furanics

R. Gesch, USDA-ARS Soil Management Research, Morris, Minnesota, United States
Agronomy of oilseed crops (e.g. influence of agronomic practices and environment on crop growth and yield, including seed oil content and composition); crop water use; photosynthesis; plant carbohydrate metabolism and usage

M. Ghorbanpour, Arak University, Department of Medicinal Plants, Faculty of Agriculture and Natural Resources, Arak, Iran, Islamic Republic of Phytonanotechnology, Diversity of Natural Products and Bioactive Compounds in Medicinal and Aromatic Plants, Bioavailability of Emerging Contaminants, Environmental Stresses, Fertilization, and Plant Secondary Metabolism Pathways.

X. He, USDA-ARS Foodborne Toxin Detection and Prevention Research, Albany, California, United States
Molecular biology; Protein detection methods; Food safety; Food contaminants and Protein toxins

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Catalytic conversion of fats and oils

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medicinal and nutraceuticals; antioxidants; waxes; resins; latices; guayule and phytochemicals of the plants of the semiarid lands

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Composites; Aerogels; Nanocelluloses; Polymers and Biopolymers; Synthesis; Properties; Interfaces; Chemical modifications of fibers; Applications

S. Korkut, Duzce University, Düzce, Turkey
Fibres and fibre compounds; natural fibres-based composites; waxes; resins; gums; rubber and other polymers; composites and reconstituted products; energy and chemicals from forest biomass; non-wood forest products; adhesives for wood; bonding strength; contact angles; adhesion by chemical bonding; mechanical properties of adhesives; surface roughness/morphology; wood-based composite materials and their applications.

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particle boards; wood; wood adhesive; nanocellulose; cellulosic composites; adhesion; interface properties; bio-based adhesives

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pulping; lignin; bleaching; biorefinery from lignocellulosics

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botanical insecticides; plant extracts; essential oils; insecticidal activity; repellency

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oil seed crops; plant breeding; genetics; agronomy; GC oil analysis

A. Pizzi, University of Lorraine, Vandœuvre-lès-Nancy, France
particle boards; wood; wood adhesive

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C. Regnault-Roger, University of Pau and Pays de l'Adour, Pau, France

natural Insecticides; essential oils; plant chemistry

J.L. Ren, South China University of Technology, Guangzhou, China

Lignocellulosic agricultural crop; Pretreatment; Cellulose; Hemicellulose; Lignin; Conversion; Biofuels; Chemicals; Biomaterials

P. R. Ribeiro, Federal University of Bahia Institute of Chemistry, SALVADOR, Brazil

Abiotic stress, Castor bean, Crop Physiology, Metabolomics, Transcriptomics

R. Roseberg, Oregon State University Klamath Basin Research & Extension Center, Klamath Falls, Oregon, United States

soil science; agronomic aspects of crop production

H. Ruiz, Autonomous University of Coahuila, Saltillo, Mexico

Renewable energy, specifically in biorefinery process and bioethanol production of second generation using lignocellulosic materials (agricultural residuos); Hydrothermal process (autohydrolysis); Simultaneous saccharification; Bioethanol fermentation and modeling of enzymatic hydrolysis

D. Scordia, University of Catania, Catania, Italy

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extractives; GC-MS

P.C. Stevenson, University of Greenwich Natural Resources Institute, Chatham, United Kingdom

Natural Products Chemistry; Bioactive compounds from plants; Botanical Insecticides; Chemical Ecology; Pollution Biology

V.K. Thakur, Cranfield University School of Engineering, Bedford, United Kingdom

Bio-Renewable Materials; Cellulose Fibres; Bio-Resins; Lignin; Membrane; Agricultural biomass; Hydrogels; Polymer Composites; Nanocomposites; Green Synthesis of Nanomaterials

D. Turley, National Non-Food Crops Centre Ltd, York, United Kingdom

non food crops in general; economic aspects; processing; rural strategies; agronomy of non-food crops; biofuels and bioenergy applications; bio-based materials

E.A. Turumtay, Recep Tayyip Erdoğan University, Rize, Turkey

Modern Liquid Chromatography Techniques; Chromatographic Analysis of Plant Based Natural Products; Phenolic Profiling; Spectroscopic Assays for Antioxidant Properties of Plant Extracts; Traditional and Modern Extraction Techniques for Bio-active compounds from Medicinal Plants; Determination of Anticancer Activities of The Natural Compounds on some Cancer Cell lines and animal models

N. Tzortzakis, Cyprus University of Technology Department of Agricultural Sciences Biotechnology and Food Science, Lemesos, Cyprus

Plant physiology; Abiotic stress; Postharvest sanitation; Medicinal/Aromatic Plants; Soilless Culture/ Hydroponics

P. Velmurugan, Jeonbuk National University, Jeonju, Korea, Republic of

J.J. Villaverde, National Institute for Agricultural and Food Research and Technology Department of Variety and PhytoSanitary Products Evaluation, Madrid, Spain

Pesticides; Environmental Technology; Biorefineries; Analytical methods; Biomimetic processes; Catalytic processes; Informatics; Computational quantum chemistry; Quantitative structure-activity relationships; Statistical modeling

M. Viuda-Martos, Miguel Hernandez University of Elche Agro-Food Technology Department, Orihuela, Spain

Coproducts; Fibre; Antioxidant; Antibacterial; Foods

G. Wang, The University of Arizona Maricopa Agricultural Center, Maricopa, Arizona, United States

crop production, nutrient management, crop rotation, and tillage management.

X. Wang, South China University of Technology, Guangzhou, China

Biomass-based Materials; Cellulose; Hemicellulose; Chitosan; Fiber; Hydrogel; Film; Aerogel; Paper

J. B. Xiao, University of Macau, Taipa, Macao

Medicinal plants, polyphenols, flavonoids, natural products, bioactivity, antioxidants Food Nutrition

Food Chemistry

C.L. Xu, Åbo Akademi University Physics, TURKU, Finland

Plant cell wall Polysaccharides; Biomass processing and fractionation; Carbohydrate chemistry; Wood chemistry; Cellulose; Biobased, biopolymer; Biorefinery

F. Xu, Beijing Forestry University School of Material Science and Technology Department of Forestry Chemistry, Beijing, China

F. Zanetti, University Hospital of Bologna Sant'Orsola-Malpighi Polyclinic, Bologna, Italy

Oilseed crops; Lignocellulosic crops; Biobased uses; Crop physiology; Abiotic stresses; Natural rubber
INTRODUCTION

*Industrial Crops and Products*, an International Journal, publishes papers reporting the results of original research, short communications and critical reviews on all aspects of industrial crops and products (defined as non-food/non-feed uses of plants and plant products). This covers a wide range of aspects of cultivation, crop improvement, crop compounds, processing, and integrated chain control, all focusing on the exploitation of agricultural crops for industrial use.

The scope of the journal covers a vast range of crops and research disciplines. Crops should contain significant renewable resources such as:

- Fibres and fibre compounds
- Carbohydrates
- Oils and fatty acids
- Waxes, resins, gums, rubber, and other polymers
- Proteins
- Essential oils for ink, lubricants, plastics, cosmetics
- Biologically active compounds for pharmaceutical, herbicides and insecticides, and preservatives.

Some examples of industrial (non-food/non-feed uses) crops are agave, cassava, crambe, cuphea, elephant grass, fibre hemp, flax, guar, guayule, jojoba, kenaf, lesquerella, maize, meadowfoam, oil palm, peas, plantago, potato, pyrethrum, rape seed, safflower, soybean, Stokes aster, sugar beet, sunflower, Vernonia, and wheat.

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- Product testing, development, and marketing
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