



# IBSCE 2017

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Conference and Exhibition

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## Keywords for delivery of papers

*Please spend a little time on this matter and remember that the reader will use your keywords to search for relevant information in the Proceedings.*

Please **select the three to six keywords most relevant to your paper** and include them in your paper as indicated in the 'Instructions for preparation of papers'. You may use additional keywords in case a keyword you would like to use does not appear on the list.

- A**
- \_ absorption
  - \_ action plan
  - \_ activated carbon
  - \_ additives
  - \_ adsorbent
  - \_ aerosol
  - \_ agricultural biogas plant
  - \_ agricultural intensification
  - \_ agricultural residues
  - \_ agriculture
  - \_ agroenergy farm
  - \_ agroindustrial residues
  - \_ agropellet
  - \_ algae
  - \_ alkali
  - \_ allothermal conversion
  - \_ allothermal gasification
  - \_ alternative energy
  - \_ alternative fuel
  - \_ alternative fuel vehicle
  - \_ ammonia
  - \_ anaerobic digestion
  - \_ anaerobic process
  - \_ analysis
  - \_ animal fat
  - \_ animal residues
  - \_ annual herbaceous crops
  - \_ arundo donax
  - \_ ashes
  - \_ assessment
- B**
- \_ bacteria
  - \_ bales
  - \_ bark
  - \_ barriers
- C**
- \_ batch reactor
  - \_ biobased products
  - \_ biobased economy
  - \_ biochar
  - \_ biochemical
  - \_ biocoke
  - \_ biodegradability
  - \_ biodegradable fraction
  - \_ biodiesel
  - \_ biodiversity
  - \_ bioenergy
  - \_ bioethanol
  - \_ biofertilisers
  - \_ biofiltering
  - \_ biofuel
  - \_ biogas
  - \_ biological conversion
  - \_ biomass
  - \_ biomass to liquid (BtL)
  - \_ biomaterial
  - \_ biomethanol
  - \_ bioplastic
  - \_ biopolymers
  - \_ biopower
  - \_ bioproducts
  - \_ biorefinery
  - \_ biorefining
  - \_ biotechnology
  - \_ boiler
  - \_ brassica carinata
  - \_ briquette
  - \_ business issue
  - \_ carbon credits
  - \_ carbon dioxide (CO<sub>2</sub>)
  - \_ catalysis
  - \_ catalyst
  - \_ catalytic conversion
  - \_ cellulose
  - \_ centralised
  - \_ centralised generation
  - \_ ceramic material
  - \_ certificate trading
  - \_ certification
  - \_ certification issues
  - \_ char
  - \_ characteristics
  - \_ characterization
  - \_ charcoal
  - \_ chemical composition
  - \_ chip
  - \_ circulating fluidised bed (CFB)
  - \_ clean development mechanisms (CDM)
  - \_ clean synthesis gas
  - \_ climate
  - \_ climate change
  - \_ climatic conditions
  - \_ clones
  - \_ CO<sub>2</sub> balance
  - \_ CO<sub>2</sub> capture
  - \_ CO<sub>2</sub> emission
  - \_ CO<sub>2</sub> reduction
  - \_ coal
  - \_ cocombustion
  - \_ coconut
  - \_ cofiring
  - \_ cogeneration

- \_ combined heat and power generation (CHP)
- \_ combustion
- \_ commercial plant
- \_ commodity market
- \_ common agricultural policy (CAP)
- \_ compaction
- \_ competitiveness
- \_ complex
- \_ composition
- \_ composting
- \_ control systems
- \_ controlled release
- \_ conversion
- \_ conversion systems
- \_ conversion technology
- \_ cooking systems
- \_ cooling
- \_ cooperation
- \_ corn
- \_ corrosion
- \_ cost analysis
- \_ costs
- \_ crop
- \_ cultivar
- \_ cultivation
- \_ cynara cardunculus

## **D**

- \_ database
- \_ decentralised
- \_ decentralised generation
- \_ decision making
- \_ dedicated biopower plant
- \_ demand
- \_ demonstration
- \_ densification
- \_ desalination schemes
- \_ desert
- \_ desertification
- \_ developing countries
- \_ diesel
- \_ diester
- \_ digestate
- \_ digestion
- \_ dimethyl ether
- \_ distributed generation
- \_ distribution
- \_ district heating

- \_ dry matter
- \_ drying
- \_ dual fluidized bed

## **E**

- \_ ecology
- \_ economical aspects
- \_ economics
- \_ ecosystems
- \_ education
- \_ efficiency
- \_ effluent
- \_ elasticity
- \_ electric osmosis
- \_ electricity
- \_ electricity sector
- \_ emissions
- \_ emission factor
- \_ emissions trading
- \_ emulsion
- \_ end products
- \_ energetic value
- \_ energy
- \_ energy balance
- \_ energy crops
- \_ engine
- \_ environmental impact
- \_ environmental limitations
- \_ environment
- \_ enzymatic hydrolysis
- \_ enzymatic process
- \_ enzyme
- \_ esterification
- \_ ethanol
- \_ ethyl acetate
- \_ ethyl tertiary butyl ether (ETBE)
- \_ eucalyptus
- \_ European Union (EU)
- \_ explosion pretreatment
- \_ external effects
- \_ externalities assessment

## **F**

- \_ farm
- \_ fast pyrolysis
- \_ feasibility studies
- \_ feeds
- \_ feeding systems
- \_ feedstock

- \_ fermentation
- \_ fertilization
- \_ fibre sorghum
- \_ fibre
- \_ filtration
- \_ financial aspects
- \_ financing
- \_ Fischer Tropsch
- \_ fixed bed
- \_ flash pyrolysis
- \_ fluidized bed
- \_ fly ashes
- \_ food
- \_ food additives
- \_ forest residues
- \_ forestry
- \_ fouling
- \_ fuel
- \_ fuel cell

## **G**

- \_ gas cleaning
- \_ gas turbine
- \_ gaseous biofuel
- \_ gasification
- \_ generation
- \_ genetic improvement
- \_ genotype
- \_ geographical information system (GIS)
- \_ globalisation
- \_ governance
- \_ grain
- \_ grass
- \_ green certificates
- \_ green chemistry
- \_ green electricity market
- \_ greenhouse gases (GHG)
- \_ guidelines

## **H**

- \_ harvesting
- \_ heat
- \_ heavy metals
- \_ hemicellulose
- \_ hemp
- \_ high calorific value
- \_ hot gas cleaning
- \_ households
- \_ hydrogasification

- \_ hydrogen
- \_ hydrolysis

## I

- \_ impact
- \_ implementation
- \_ industrial chemicals
- \_ industrial scale application
- \_ industry
- \_ inhibitors
- \_ innovative concepts
- \_ integrated gasification combined cycle (IGCC)
- \_ integration
- \_ internal combustion engine
- \_ international
- \_ irrigation

## J

- \_ jatropha curcas
- \_ joint implementation (JI)

## K

- \_ kenaf
- \_ Kyoto protocol

## L

- \_ land use
- \_ landfills
- \_ landfill gas
- \_ large utility
- \_ learning curve
- \_ legal aspects
- \_ life cycle assessment (LCA)
- \_ lignin
- \_ lignocellulose
- \_ lignocellulosic sources
- \_ liquefaction
- \_ liquid biofuel
- \_ local
- \_ logistics
- \_ losses
- \_ low calorific value
- \_ low temperature

## M

- \_ macroalgae
- \_ maize
- \_ management

- \_ manure
- \_ marginal effects
- \_ market
- \_ market forecasts
- \_ marketing
- \_ mass balance
- \_ mass flow analysis
- \_ measurement
- \_ mechanization
- \_ methane
- \_ methanol
- \_ microturbine
- \_ microalgae
- \_ miscanthus
- \_ mixed biomass pellet
- \_ mixtures
- \_ model
- \_ modelling
- \_ moisture
- \_ monitoring
- \_ municipal solid waste (MSW)

## N

- \_ national
- \_ natural gas
- \_ new cultivar
- \_ nitrogen/carbon ratio
- \_ novel crops
- \_ NO<sub>x</sub> emission

## O

- \_ oil
- \_ oil crops
- \_ oilseeds
- \_ olive tree
- \_ operation and maintenance
- \_ organic rankine cycle (ORC)
- \_ organic waste
- \_ oxidation
- \_ oxygenated compounds

## P

- \_ palm
- \_ palm oil
- \_ panels
- \_ panicum virgatum
- \_ paper
- \_ paper production

- \_ particle emission
- \_ peat
- \_ pellet
- \_ pelletization
- \_ perennial energy crops
- \_ performance
- \_ pesticides
- \_ petrochemicals substitute
- \_ photosynthesis
- \_ pilot plant
- \_ plant
- \_ policies
- \_ polluted soil
- \_ pollution
- \_ polygeneration
- \_ poplar
- \_ potential
- \_ power generation
- \_ pretreatment
- \_ process heat
- \_ processing industry
- \_ product gas
- \_ production
- \_ project
- \_ project development
- \_ promotion
- \_ protection issues
- \_ proteins
- \_ pulp
- \_ pyrolysis
- \_ pyrolysis oil

## Q

- \_ quality
- \_ quality standards

## R

- \_ rapeseed
- \_ rapeseed oil
- \_ reactivity
- \_ reactor
- \_ recycling
- \_ reduction
- \_ reed canary grass
- \_ reforestation
- \_ reforming
- \_ regional
- \_ regulation
- \_ removal
- \_ renewable energies

- \_ residues
- \_ resources
- \_ rice husks
- \_ rice straw
- \_ rotation
- \_ round wood
- \_ run off
- \_ rural development

## **S**

- \_ sampling
- \_ sawdust
- \_ second generation
- \_ security
- \_ seeds
- \_ set-aside agricultural land
- \_ sewage sludge
- \_ sewage treatment
- \_ shell
- \_ short rotation forestry (SRF)
- \_ sintering
- \_ sludge
- \_ small scale application
- \_ social aspects
- \_ socio-economic impact
- \_ software
- \_ soil fertility
- \_ solid biofuel
- \_ sorghum bicolor L. Moench
- \_ stakeholders
- \_ stand-alone systems
- \_ standards
- \_ standardisation
- \_ steam
- \_ steam engine
- \_ steam explosion
- \_ stirling engine
- \_ storage
- \_ stove
- \_ strategies
- \_ strategy
- \_ straw
- \_ structure
- \_ study
- \_ sugar
- \_ sugar beet
- \_ sugar cane
- \_ sugar cane bagasse
- \_ sugar crops
- \_ sunflower

- \_ sunflower oil
- \_ supply
- \_ supply chain
- \_ sustainability
- \_ sustainability criteria
- \_ sustainability standards
- \_ sweet sorghum
- \_ switchgrass
- \_ strengths weaknesses opportunities threats (SWOT) analysis
- \_ syngas
- \_ synthetic natural gas (SNG)

## **T**

- \_ tar
- \_ tar removal
- \_ technology
- \_ temperate regions
- \_ tertiary sector
- \_ thermochemical conversion
- \_ timber
- \_ torrefaction
- \_ toxicity
- \_ trade
- \_ training
- \_ transesterification
- \_ transport
- \_ transport sector
- \_ transportation
- \_ treatment
- \_ trigeneration
- \_ tropical regions

## **U**

- \_ upgrading
- \_ urban area
- \_ urban wastes
- \_ utility scale

## **V**

- \_ vegetable oil
- \_ vehicles
- \_ venture capital
- \_ viscosity

## **W**

- \_ waste
- \_ waste disposal
- \_ wastewater

- \_ wastewater treatment
- \_ water use
- \_ wheat
- \_ wheat straw
- \_ willow
- \_ winery
- \_ wood
- \_ wood chip
- \_ wood crops
- \_ wood pellet
- \_ worldwide deployment

## **Y**

- \_ yield

## **ADDITIONAL KEYWORDS**

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