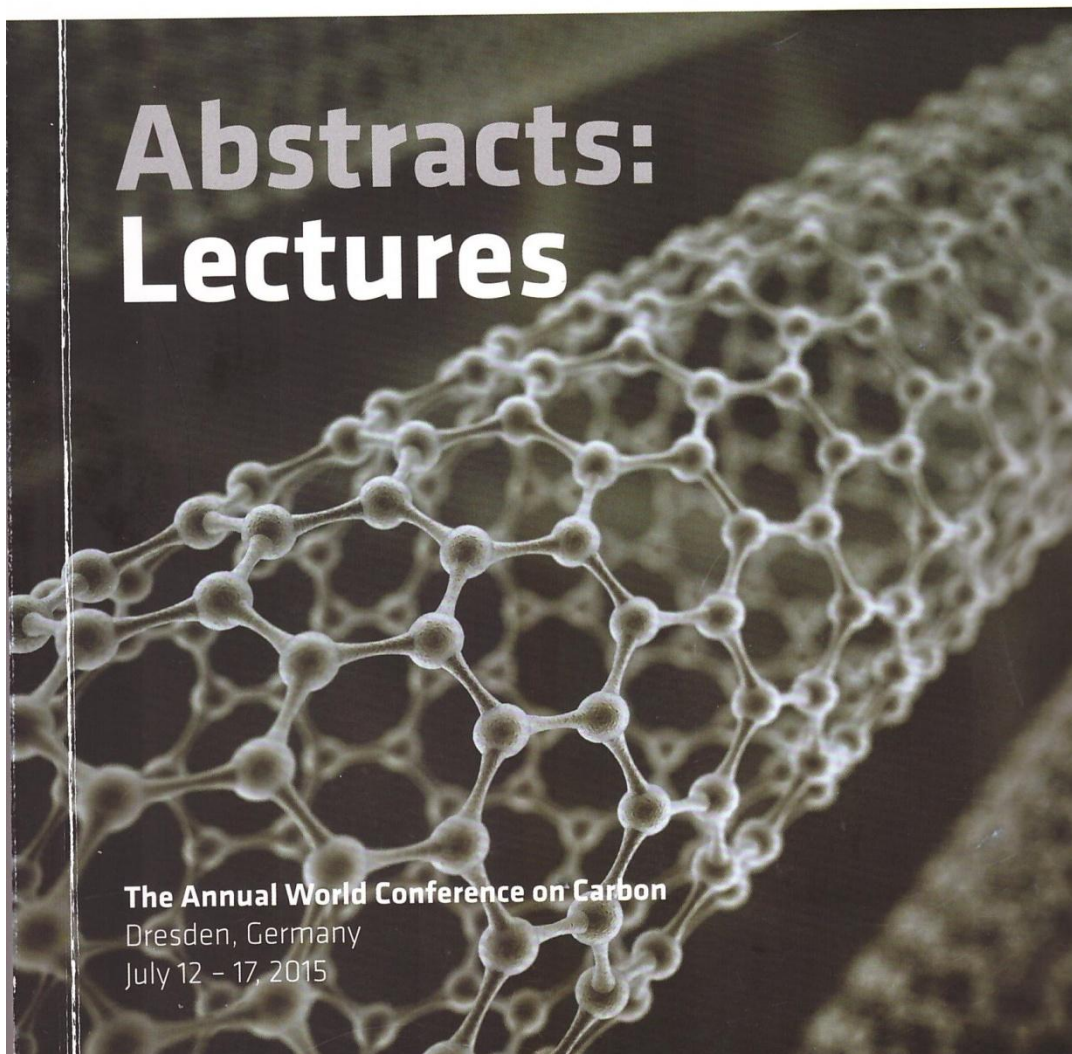


 **CARBON 2015**

**INNOVATION WITH
CARBON MATERIALS**

Abstracts: Lectures

The Annual World Conference on Carbon
Dresden, Germany
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- 84 Effects of Hydrophobic Agent Contents in Macro-Porous Substrates on the Fracture Behavior of the Gas Diffusion Layer for PEMFC
KIM, Sungh
- 85 Copper and copper alloys as a composite matrix for recycle carbon fiber reinforcement
KLASSERI, Anton
- 86 New precursors for the development of carbon fibers: the case of Lignin
Koumoulos, Elias
- 87 Renewable source nanostructured precursors for carbon fibers
LESLIE HINSEY, Maritz
- 88 Flexural Fatigue behavior of 2D cross-ply carbon/carbon composites at room temperature
LI, Kezhi
- 89 Structured multilayer electrodes made of conductive polymer and carbon nanotubes for Polymer Electrolyte Membrane Fuel Cells
LOMB, Hongbin
- 90 The Black Art of Developing Stages of Carbon Paper as Efficient Materials for Energy Generation, Storage, and Conservation
MAHLECHVARI, Piyanka
- 91 Compatibilization of pitch-based carbon fibre with high performance thermoplastic by a molecule-man-assembly for adhesion promotion
MARTIN, Amard
- 92 The properties of carbon nanotube enhanced composite materials with their alignment
MEDIA, Soek Young
- 93 Solution Spun Lignin/PAN Hybrid Carbon Fibers and Their Properties
MIGNON, Audey
- 94 Obtaining hydrophobic coat with iron nanoparticles
NAZIBEKY, S. Meruyet
- 95 The effect of nanostructure upon the tensile strength distribution of PAN-based carbon fibres
OKUDA, Haruki
- 96 Carbon Nanotube based Epoxy Composites for Thermal Management
OPAKASHI, Vikas
- 97 Carbon Nanotube/Carbon Film Nanostructures for Nanoeingeneered Composites
ROMERO, Pablo
- 98 Carbon fibre surface enhancement using novel organic chemistry techniques: toward new generation materials
SERVINIS, Linden
- 99 Production and characterization of carbon felt from wood
TANLUFEDI, Nedra
- 100 Structure and mechanical characteristics of carbon fibers from aromatic polymer precursors
YAMATA, Naoko
- 101 Finite Element analysis of Carbon/Carbon composites thermal dilation based on X-ray microtomographic data
VIENOTIS, Gerard
- 102 Carbon Fiber Composites in Wind Turbines - Advantages and Challenges
WU, Chir-Gan

Carbon Materials for Energy Storage

- 105 Use of Graphite as a Highly Reversible Electrode with Superior Cycle Life for Sodium-Ion Batteries by Making Use of Co-Intercalation Phenomena
ADRI HELM, Philipp
- 106 Electrochemical response of doped ultra-high micro/mesoporous carbon aerogel electrodes in saline water
ARMA, Lourdes, (M. Concepcion)
- 107 Nanoporous carbon/graphite hybrid capacitors using sacrificial lithium derivatives for pre-irradiation of the graphite anode
BELJAIN, Francois
- 108 Illuminating Carbon-Electrolyte Interactions: Solid-State NMR Studies on Model Carbons with well-defined Porosity
BORCHARDI, Luis
- 109 Stable, High Capacity Carbon-Silicon Anodes for Li-Ion Batteries Using Directed Assembly
BONI, Anji

Obtaining hydrophobic soot with iron nanoparticles

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CF35

One of the most important areas of synthesis of new materials is obtain nanoparticles with desired physical, chemical and structural parameters to create on their basis of functional materials. When you create any nano-object, there are difficulties associated with their high chemical activity and a tendency to aggregate. To prevent of process of aggregation and protect from oxidizing environments, the nanoparticles can be synthesized in a shell of inert material. In this paper we present a study on the production of soot containing iron nanoparticles. The distinguishing feature of this soot is that iron nanoparticles enveloped nanoscale carbon layer, which prevents them from aggregated and oxidized in air. By developed method can be obtained not only soot nanoparticles of iron, but of other metals. The obtaining soot may find application in the power consuming materials and highly effective electrodes.

The essence of our method consists in saturating of soot with metal salts, and subsequent activation its by thermal influence in an inert medium, that leads to the recovery nanoparticles of metal at the expense of sooting carbon.