

Master Thesis Brief Description

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| Thesis Title | Conversion of waste coffee grounds to solid biofuels |
| Programme of Studies | MSc in Sustainable Energy Systems |
| Course | MES 580 Master Thesis |
| Area of Study | Sustainable Energy Technologies – Biofuels Assessment |
| Student's Name | George Skroumpelos |
| Students Reg. Number | 8596 |
| Supervisor | Dr.-Ing. Paris A. Fokaides, Ass. Professor, Mechanical Engineering Department |
| Supervisory Committee | Dr Chris Christodoulou, Professor, Mechanical Engineering Department Dr. George Karagiorgis, Assoc. Professor, Mechanical Engineering Department |
| Semester | Fall Semester 2018 |
| Short Description | <p>The number of coffee shops serving brewed coffee has increased radically the past few years in Cyprus, resulting to significant quantities of waste coffee ground. This waste stream could potentially be exploited as a feedstock for solid biofuels</p> <p>The purpose of this study is the comprehensive investigation of the use of waste coffee grounds as a raw material for solid biofuels. In terms of this study, sampling of waste coffee ground, elemental and proximal analysis should be implemented at the Sustainable Solid Fuels Lab of the Sustainable Energy Research Group (link). The sampled material will also be pelletized with the use of the pelleting unit of the Agricultural Research Institute. The performance of the combustion of waste coffee grounds pellets in terms of the efficiency and the combustion emissions should also be investigated through a measurement campaign at Frederick Boilers Lab (link). Within this study, the waste coffee ground potential of Cyprus should be delivered, as well as its potential contribution to Cyprus energy mix.</p> |