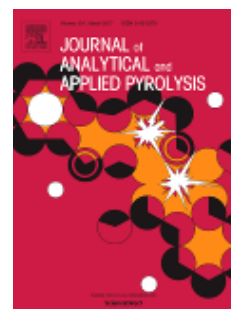




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DESCRIPTION

The international *Journal of Analytical and Applied Pyrolysis* is devoted to the publication of qualitative and quantitative results relating to:

- **Controlled pyrolysis** (thermal degradation, thermolysis) of chemical materials, including synthetic and natural macromolecules as well as lower molecular weight chemicals.
- Fundamental studies of **pyrolysis processes** by chemical, physical and physicochemical methods.
- Studies of pyrolysis **reaction kinetics**, energetics, and mechanisms.
- Technical developments and new instrumentation for pyrolysis techniques in combination with chromatographic or spectroscopic **methods**.
- **Analytical pyrolysis**, namely the characterization of a material by chemical degradation reactions induced by thermal energy or by thermally assisted decomposition reactions.
- Environmental, geochemical, biological, medical, and forensic applications of **analytical pyrolysis**.
- Pyrolysis investigations of **energy**-related problems, looking for relationships between pyrolysis conditions and product characteristics (i.e. fossil/synthetic fuels, biomass derivatives, thermal catalytic products, coal liquefaction products).
- Automation, optimization and standardization of pyrolysis **techniques**.
- **Computer** handling and **processing** of pyrolysis **data**, including library filing and retrieval techniques, and computer matching and advanced pattern recognition techniques.
- Studies in **high temperature chemistry** of synthesis and decomposition reactions.
- **Applied pyrolysis**, i.e. the use of pyrolysis methods, including thermal cracking, catalytic cracking, hydrothermal treatments, in the disposal of waste materials, in exploiting biomass resources, in fossil fuel transformations for the production of energy, valuable chemicals or engineering materials.

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- theoretical studies, kinetic modelling etc. which are not complemented/validated with experimental data;
- combustion, incineration, unless specifically related to the pyrolysis process.

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Analytical Chemists; Researchers involved in Chromatography, Mass Spectrometry, and Polymer Science; Geochemists, Technologists in Plastic and Rubber Industries; Bacteriologists; Food and Medical Chemists.

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INTRODUCTION

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[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

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mass m kilogram kg; gram g
time t ; second s; minute min; hour h
thermodynamic temperature T ; kelvin K
Celsius temperature $t, ^\circ$ degree Celsius C
amount of substance n ; mole mol
molar mass M ; kg mol⁻¹
concentration (amount) c ; mol dm⁻³, mol l⁻¹
molality m ; mol kg⁻¹
pressure p ; pascal Pa
energy E ; joule J
heat q, Q ; joule J
power, heat flow rate P, \dot{q} ; watt W
volume V ; m³; litre l, L
chemical potential (partial molar Gibbs energy) μ J mol⁻¹
viscosity: dynamic η Pa s ; kinematic ν m² s⁻¹

Prefixes

10⁻¹ d; 10⁻² c (centi); 10⁻³ m (milli); 10⁻⁶ μ (micro); 10⁻⁹ n (nano); 10⁻¹² p (pico); 10⁻¹⁵ f (femto); 10⁻¹⁸ a (atta)

10 da (deca); 10² h (hecto); 10³ k (kilo); 10⁶ M (mega); 10⁹ G (giga); 10¹² T (tera); 10¹⁵ P (peta); 10¹⁸ E (exa)

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