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Programme
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The Book of Abstracts

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P.S.A.7

INFLUENCE OF DIFERENT POISSON'S COEFFICIENTS OF ADHERENTS ON STRESS DISTRIBUTION IN THE CASE OF STEP COMPOSITE JOINT

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The influences of Poisson's coefficients the case of step joint of two composite plates are analyzed using the finite element method. Geometry of the joint, boundary condition and type as well as amount of loading can be varied as per the requirement. Method also allows varying the properties of adherents and adhesives that include modulus of elasticity, Poisson's ratio as well as allowable stress values. Mesh size is

The results show the places where the maximum normal and shear stresses accurse. It is interesting to note that the variations of stress values in the x direction is small when compared with x and y directions.

Key words: composite plates, finite element analysis, step joint.

P.S.A.8

SYNTHESIS OF LiFePO$_4$ BY MECHANICAL STRESSING AND THERMAL ANNEALING

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Mechanical activation can be regarded as a multi-step process with changes in the energetic parameters and the amount of accumulated energy of solids in each step. Here we report the influence of mechanochemical processing on the synthesis of LiFePO$_4$ powders. The different precursor powders were milled in a planetary mill by using WC vials and 5 mm balls made of the same material. A slightly reductive atmosphere (Ar + 5%H$_2$) was used in both mechanical stressing and thermal annealing so as to prevent the oxidation of iron. All synthesis steps were followed by an X-ray diffractometry and FT-IR spectroscopy. The results were compared with previous findings of precipitated and annealed powder, without mechanochemical treatment.