

# **ТЕЗИСЫ ДОКЛАДОВ**

## **INTERNATIONAL WORKSHOP**

**«Multiscale Biomechanics and Tribology  
of Inorganic and Organic Systems»**

## **МЕЖДУНАРОДНАЯ КОНФЕРЕНЦИЯ**

**«Перспективные материалы с иерархической структурой  
для новых технологий и надежных конструкций»**

**VIII ВСЕРОССИЙСКАЯ НАУЧНО-ПРАКТИЧЕСКАЯ  
КОНФЕРЕНЦИЯ С МЕЖДУНАРОДНЫМ УЧАСТИЕМ,  
ПОСВЯЩЕННАЯ 50-ЛЕТИЮ ОСНОВАНИЯ  
ИНСТИТУТА ХИМИИ НЕФТИ**

**«Добыча, подготовка, транспорт нефти и газа»**

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**EFFECT OF PRE-STRAIN ROLLING PATH ON ABNORMAL GRAIN GROWTH IN FRICTION-STIR WELDED AL-MG-SI ALLOY**

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Ultrafine-grained structure in stir zone of Al-Mg-Si sheets joined by double-side friction stir welding exhibits abnormal grain growth during post-weld heat treatment. To suppress AGG the welds were cold-rolled in two different directions - parallel welding direction and perpendicular direction to the weld line. At pre-strain rolling in the parallel direction, the mean grain size in the stir zone after post-weld heat treatment was about 45  $\mu\text{m}$ . At other pre-strain rolling path, the mean grain size in the stir zone after post-weld heat treatment was about 80  $\mu\text{m}$ .

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