**Bulgarian Academy of Sciences**

**Institute of Chemical Engineering**

**CERTIFICATE**

**SH wave scattering by a nanocrack in a graded piezoelectric half-plane with nano-relief**

**Tsviatko Rangelov, Petia Dineva**

**This is to certify that the paper has been presented in the**

**2nd SEMINAR ON**

**INVESTIGATIONS, MODELING AND OPTIMIZATION**

**OF NANOCOMPOSITES STRUCTURES,**

**2nd April, 2025, Hotel of BAS, Sofia, Bulgaria**

 **Prof DSc Kaloyan Petrov …………………**

**Institute of Chemical Engineering**