# Article information:

A mathematical model for calculating rod-shaped proppant conductivity under the combined effect of compaction and embedment  
<https://scholar.cnki.net/zn/Detail/index/GARJ2019/SJESCA51B74D7EECCD262E59855426A847F3>

# Article summary:

1. Mathematical models were derived to calculate fracture conductivity, reduction in fracture aperture, proppant embedment, and deformation of rod-shaped proppants based on Hertz theory of elastic contacts.

2. The models for calculating the porosity of the fracture with proppants in loose and close packing modes were also established in this study.

3. Rod-shaped proppants are theoretically more promising for hydraulic fracturing compared to spherical proppants, especially under low elastic moduli and high closure pressures.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

作为一篇科学研究论文，该文章的内容相对客观和中立。然而，它可能存在一些偏见和局限性。

首先，该文章只关注了杆状支撑剂在水力压裂中的应用，并没有考虑其他类型的支撑剂。这可能导致作者忽略了其他类型支撑剂的优点和缺点。

其次，该文章只是基于理论模型进行计算，并没有进行实验验证。因此，这些结果需要进一步验证才能确定其准确性和可靠性。

此外，在文章中提到杆状支撑剂比球形支撑剂更有前途，但并没有提供足够的证据来支持这个主张。作者也没有探讨可能存在的风险或不利影响。

最后，该文章并未平等地呈现双方观点或考虑到其他相关因素。例如，它没有探讨水力压裂对环境和公共健康的潜在影响。

总之，尽管该文章提供了有价值的信息和分析，但仍需要更多实验验证和全面考虑各种因素才能得出更准确、可靠、全面的结论。

# Topics for further research:

* Other types of proppants
* Experimental validation
* Potential risks and negative impacts
* Comparison with other proppants
* Environmental and public health impacts
* Comprehensive consideration of various factors

# Report location:

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