# Article information:

Source-mask co-optimization: optimize design for imaging and impact of source complexity on lithography performance  
<https://wvpn.ustc.edu.cn/https/77726476706e69737468656265737421e7e056d2342061557a018ea58c542f39fbd3203a948bb14b80e9/conference-proceedings-of-spie/7520/1/Source-mask-co-optimization--optimize-design-for-imaging-and/10.1117/12.838701.full?SSO=1>

# Article summary:

1. Source-mask co-optimization is crucial for advanced ArF technology node development.

2. A pixelated freeform source and a continuous transmission gray tone mask are co-optimized based on a user-specified cost function, and scanner-specific models and constraints are applied to the optimized source.

3. An optimize design for imaging methodology is introduced and shown to be important for low k1 imaging, and the impact of source complexity on lithography performance is studied with different k1 values.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

该文章主要介绍了源和掩模图案的共同优化对于先进ArF技术节点开发的重要性，并提出了一种基于用户指定成本函数的像素化自由形源和连续透射灰度掩模的共同优化方法。然而，该文章存在以下几个问题：

1. 偏袒ASML

该文章中多次提到使用ASML认证的扫描仪特定模型和约束条件，但未提及是否有其他可用的模型和约束条件。这可能会导致读者认为ASML是唯一可靠的选择。

2. 缺乏反驳

该文章没有探讨任何可能与其观点相矛盾或反驳其观点的证据或观点。这可能会导致读者认为该方法是唯一正确的选择。

3. 片面报道

该文章只关注了源和掩模图案共同优化对于先进ArF技术节点开发的重要性，但未考虑其他因素如成本、时间等。这可能会导致读者忽略了其他重要因素。

4. 宣传内容

该文章中多次强调使用其方法可以获得最佳光刻性能，但未提供足够证据支持此主张。这可能会误导读者并使他们忽略其他可行方案。

5. 未平等地呈现双方

该文章只介绍了一种方法，未探讨其他可能的方法或观点。这可能会导致读者认为该方法是唯一可行的选择。

综上所述，该文章存在偏袒、片面报道、宣传内容等问题，需要更全面地考虑各种因素和可能的选择，并提供足够证据支持其主张。

# Topics for further research:

* Alternative models and constraints for scanner certification
* Counterarguments or conflicting evidence
* Other factors such as cost and time
* Evidence supporting claims of best lithographic performance
* Other possible methods or perspectives
* Balanced presentation of different options and considerations

# Report location:

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