



**Crystal structure and Hirshfeld Surface Analysis of (4-methylphenyl)  
[2-(methylsulfanyl)thiophen-3-yl]methanone**

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**ABSTRACT**

*The title compound of (4-methylphenyl)[2-(methylsulfanyl)thiophen-3-yl]methanone, was synthesized and characterized by single crystal X-ray diffraction method. The structure was confirmed by X-ray diffraction studies. The compound crystallizes in the monoclinic crystal system with the space group P2(1), unit cell parameters  $a= 5.670(6) \text{ \AA}$ ,  $b= 13.903(13) \text{ \AA}$ ,  $c= 7.707(7) \text{ \AA}$ ,  $\beta= 94.33(2)^\circ$ , and  $Z=2$ . The structure exhibits intermolecular hydrogen bonds of the type C-H...O. Hirshfeld analysis was carried out in order to understand the packing pattern and intermolecular interactions.*

**Keywords:** Thiophene, Crystal structure, Hirshfeld Surfaces, C-H...O interaction.

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