

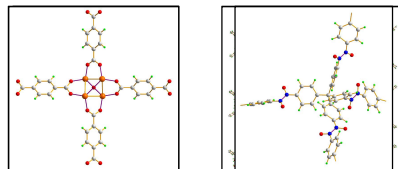


6th Asian Conference on  
Coordination Chemistry  
ACCC6  
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## EXPLORING C-H...METALLOAROMATIC INTERACTIONS

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SUNWAY UNIVERSITY  
MALAYSIA

## Crystal Formation (Primary Bonding)

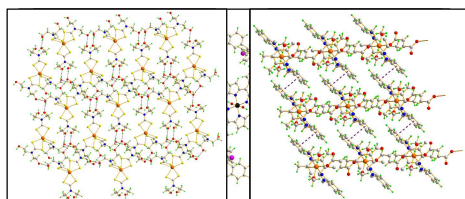


REFCODE:

SHAYIK

VIHVID

## Crystal Formation (Secondary Bonding)



REFCODE:

RUGSIV01

DUKFO6

EGODEL

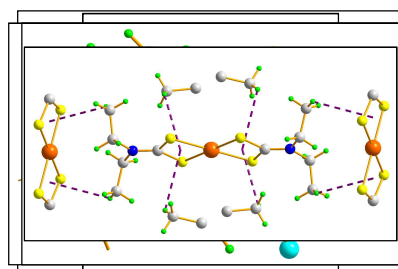
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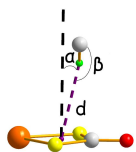
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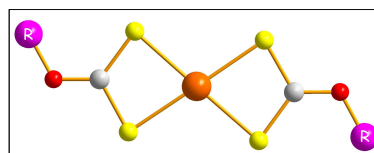
## Introduction, C-H...Metalloaromatic Interactions



- C-H ...  $\pi$ (Chelate)
  - $\alpha < 20^\circ$
  - $110^\circ \leq \beta \leq 180^\circ$
  - $2.4 \text{ \AA} \leq d \leq 3.6 \text{ \AA}$

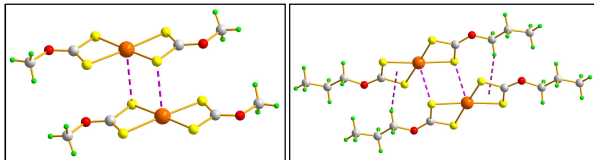
E. R. T. Tiekink and J. Zukerman-Schpector Chem. Commun. 2011, 47, 6623-6625

## Palladium(II) Xanthate



R= Me, Et, *n*-Pr, *i*-Pr, *n*-Bu, *i*-Bu, *n*-Pent, *i*-Pent, *neo*-Pent,  
*n*-Hx, *i*-Hx, *neo*-Hx

## Zero Dimensional Motif

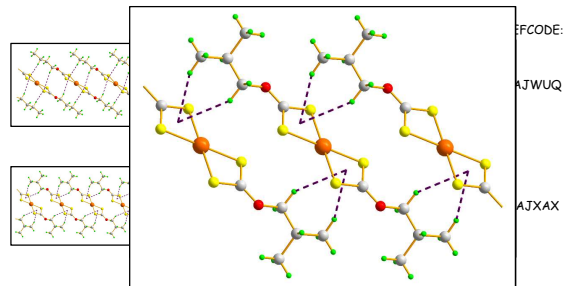


REFCODE:

LINMOLO2

KAJWIE

## One Dimensional Motif

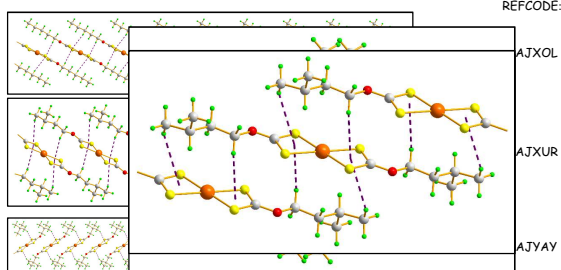


REFCODE:

KAJWUQ

KAJXAX

## One Dimensional Motif



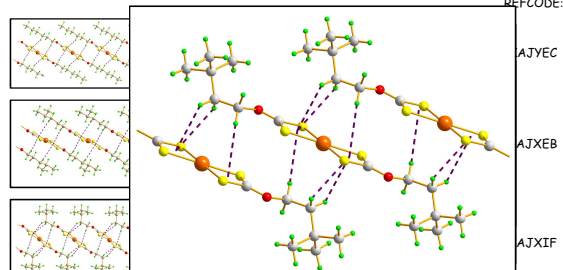
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KAJXOL

KAJXUR

KAJYAY

## One Dimensional Motif



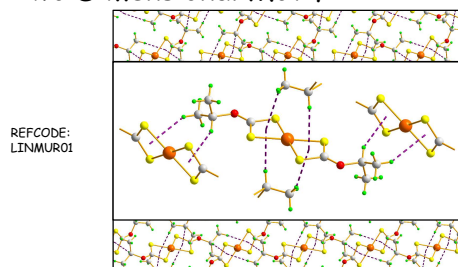
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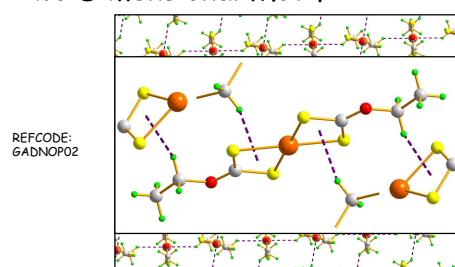
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KAJXIF

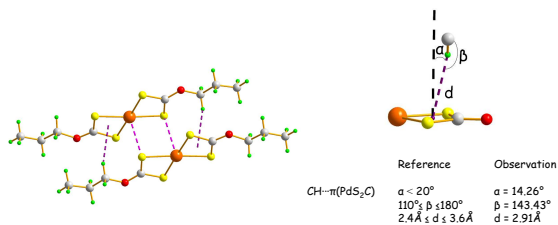
## Two Dimensional Motif

REFCODE:  
LINMUR01

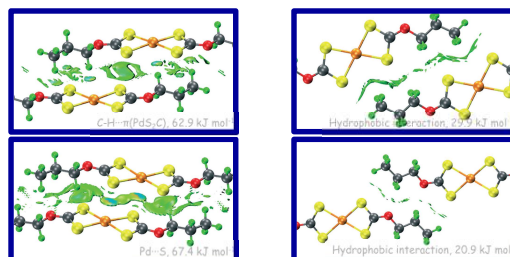
## Two Dimensional Motif

REFCODE:  
GADNPO2

## Computational Calculation



## Stabilising Energy



## Conclusion

- 12 compounds
  - Crystallographically studied
- C-H- $\pi$ (metalloaromatic)
  - 11/12 Compounds
- Strength of the C-H- $\pi$ (metalloaromatic) interaction
  - Similar with Coordination Bond Pd-S
- Emerging but non-common focus interaction
  - Important in Crystal System

## Acknowledgment

- Sunway University
- ACCC6 Organising Committee
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- Dr Alberto Otero-de-la-Roza

SUNWAY  
UNIVERSITY

Jeffrey Cheah  
Foundation  
*Nurturing the Seeds of Wisdom*

After ACCC6 in Melbourne???????



ACCC7 at Kuala Lumpur, Malaysia in 2019



Photo taken from [www.tourism.gov.my](http://www.tourism.gov.my)

ACCC7 at Kuala Lumpur, Malaysia in 2019



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