CHIRAL RHENIUM COMPOUNDS

R/S nomenclature and which ENANTIOMER to show in figures

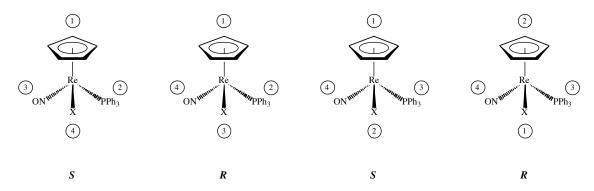
- **1.** Compounds with One Stereocenter
 - 1.1 Prioritize all ligands involved in your study, such as in footnote 9 of publication #132 [Organometallics, 1191 (1990)].

Example:

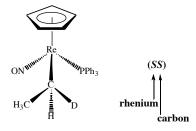
$$I > \eta^5 - C_5 H_5 > \eta^1 - CIC_6 H_5 > PPh_3 > \eta^2 - O = CHR > \eta^2 - C_6 H_5 CI, \; \eta^2 - H_2 C = CHR > O(C = O)R > NO > NCR > CH_3.$$

1.2 Draw <u>each</u> compound and assign priority.

Examples:

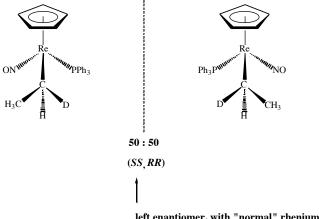


- 2. Compounds with more than one stereocenter (pre-1999 formats)
 - 2.1 Specify the rhenium stereocenter first.



- 2.2 If there are multiple stereocenters, list them in decreasing order of atomic priority (e.g., Re > P > C; XYZC-Re > XYZC-O). Use subscripts, when extra clarity is needed ($S_{Re}S_{C}$ for above; or $S_{Re}R_{P}S_{C}$ in a more complex compound).
- 2.3 For racemic mixtures of diastereomers, specify the enantiomer with the <u>relative</u> rhenium configuration shown in (1) first.

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- left enantiomer, with "normal" rhenium
- Compounds with more than one stereocenter (post-1999 formats) **3.**
 - The same conventions are followed as in II, but the compounds in the graphic would be specified as S_{Re} , S_{C} , R_{Re} , R_{C} . The subscripts are not italicized. 3.1

In the future, greater use of subscripted S/R designations is anticipated.

- 4. Figures, schemes, etc.:
 - Always use this general template when possible: 4.1

