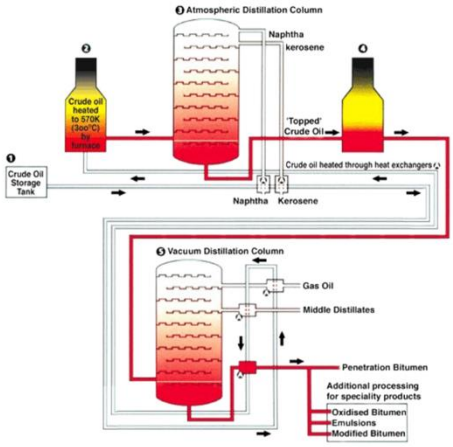
Errata list Govindan Induchoodan's PhD thesis

Figures:

1. Figure1.1, the text ''Other popular example of application of graphene in bitumen as a gas layer'' in the figure should be ''Other popular examples of applications of graphene''.
2. Figure 2.1 should be replaced by the following figure:



The new figure source is as follows: Lesueur, D. (2009) "The colloidal structure of bitumen: Consequences on the rheology and on the mechanisms of bitumen modification," Advances in Colloid and Interface Science, 145(1-2), pp. 42–82. Available at: https://doi.org/10.1016/j.cis.2008.08.011.

3. Source of graphene in figure 3.3: https://commons.wikimedia.org/wiki/File:Graphene_structure.svg
4. Source of GO in figure 3.3: https://commons.wikimedia.org/wiki/File:GrapheneOxide.png
5. Source of rGO in figure 3.3: https://commons.wikimedia.org/wiki/File:ReducedGrapheneOxide.png
6. Source of figure 6.5: https://upload.wikimedia.org/wikipedia/commons/0/07/XPS_PHYSICS.png (The source of all the figures are presented in page XV).

Text:

1. Page 2: Ref. 14 should be added to the sentence: ''However, graphene is not naturally soluble in bitumen [13]'' so it becomes ''However, graphene is not naturally soluble in bitumen [13,14]''
2. Page 33/34: Table numbers are table 5.1 and 5.2, and not 3.1 and 3.2.
3. Page 33: The first sentence of the main text should be:, '' lowers the surface tension, and also prevents the asphaltene molecules from precipitating [80-81]''.
4. Page 34: The sentence "Next, we calculated their compatibility (solubility), and simultaneously reviewed their dispersibility for asphaltenes in the compatible organic compounds from the literature [81 - 88]." should be "Next, we reviewed the dispersibility for asphaltenes in the compatible organic compounds from the literature [81 - 88]."
5. Page 37: The sentence: "The asphaltene aggregate system used in paper 1 has a composition of 5 % asphaltenes, 5 % DBSA, >90 % saturates." should be "The asphaltene aggregate system used in paper 1 has a composition of 0.1 % asphaltenes, 5 % DBSA, 94.9 % saturates."

Tables:

1. Table 5.1: Hansen solubility parameter, surface energy, and molar mass of various solvents [81].
2. Table 5.2: The dispersibility of asphaltene and graphene in different organic compounds [101].
3. Table 3, paper 2, should be:

Name	Saturates (%)	DBSA (%)	Asphaltene nanoaggregates (%)	PBA-graphene (%)
Colloidal precursor	95	5	0	0
Asphaltene aggregate system	94.9	5	0.1	0
PBA-graphene system	94.8	5	0.1	0.1

References:

1. Reference 12 should be: Ahmad Nazki, M., Chopra, T. and Chandrappa, A.K. (2020) "Rheological properties and thermal conductivity of bitumen binders modified with graphene," Construction and Building Materials, 238, p. 117693. Available at: https://doi.org/10.1016/j.conbuildmat.2019.117693.
2. Reference 14 should be: Johnson, D.W., Dobson, B.P. and Coleman, K.S. (2015) "A manufacturing perspective on graphene dispersions," Current Opinion in Colloid & Interface Science, 20(5-6), pp. 367–382. Available at: https://doi.org/10.1016/j.cocis.2015.11.004.