

تاریخچه

## عیسیٰ یاوری

گرایش: شیمی

رتبه علمی: استاد

دکتری: شیمی

کارشناسی ارشد: شیمی

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ندریس

شیمی فیزیک آلی

استریو شیمی

شیمی ترکیبات هتروسیکل

پیشرفتہ NMR

سنتر ترکیبات آلی

## 2009

Yavari, I., Hossaini, Z., Sabbaghan, M., Ghazanfarpour-Darjani, M., **A one-pot synthesis of functionalized thiazoles from acid chlorides, secondary amines, ethyl bromopyruvate, and ammonium thiocyanate**, 2009, *Molecular Diversity* 13 (3), pp. 295-300

Yavari, I., Yavari, P., Kowsari, E., **Ionic liquids as novel reaction media for the synthesis of copoly(ester-amide)s containing 9,10-Anthraquinone moiety**, 2009, *Synthetic Communications* 39 (14), pp. 2540-2548

Yavari, I., Mirzaei, A., Hossaini, Z., Souri, S., **Diastereoselective synthesis of fused [1,3]oxazines from ethyl pyruvate, activated acetylenes and N-heterocycles**, 2009, *Molecular Diversity*, pp. 1-5 Article in Press

Yavari, I., Souri, S., Sirouspour, M., Bayat, M.J., **An efficient synthesis of functionalized 6,10-dioxo-6,10-dihydro-5H-pyrido[1,2-a]quinoxalines and 6,10-dioxo-6,10-dihdropyrido[2,1-c][1,4] benzoxazines**, 2009, *Synlett* (12), pp. 1921-1922

Yavari, I., Mahjoub, A.R., Kowsari, E., Movahedi, M., **Synthesis of ZnO nanostructures with controlled morphology and size in ionic liquids**, 2009, *Journal of Nanoparticle Research* 11 (4), pp. 861-868

Yavari, I., Iravani, N., Sayyed-Alangi, S.Z., Hajinasiri, R., **A one-pot synthesis of alkyl acylcarbamodithioates from acid chlorides, thiols, and ammonium thiocyanate**, 2009, *Monatshefte fur Chemie*, pp. 1-6 Article in Press

Yavari, I., Kowsari, E., **Efficient and green synthesis of tetrasubstituted pyrroles promoted by task-specific basic ionic liquids as catalyst in aqueous media**, 2009, *Molecular Diversity*, pp. 1-10 Article in Press

Khalilzadeh, M.A., Yavari, I., Hossaini, Z., Sadeghifar, H., **N-Methylimidazole-promoted efficient synthesis of 1,3-oxazine-4-thiones under solvent-free conditions**, 2009, *Monatshefte fur Chemie* 140 (4), pp. 467-471

Yavari, I., Hossaini, Z., Souri, S., Seyfi, S., **Diastereoselective synthesis of fused [1,3]thiazolo[1,3]oxazins and [1,3]oxazino[2,3-b][1,3]benzothiazoles**, 2009, *Molecular Diversity*, pp. 1-5 Article in Press

Yavari, I., Piltan, M., Moradi, L., **Synthesis of pyrrolo[2,1-a]isoquinolines from activated acetylenes**,

- benzoylnitromethanes, and isoquinoline**, 2009, *Tetrahedron* 65 (10), pp. 2067-2071  
Yavari, I., Hajinasiri, R., Sayyed-Alangi, S.Z., **A synthesis of diethyl alkylsulfanyl methylmalonates catalyzed by KOH in an ionic liquid**, 2009, *Monatshefte fur Chemie* 140 (2), pp. 205-207  
Yavari, I., Sayyed-Alangi, S.Z., Hajinasiri, R., Sajjadi-Ghotbabadi, H., **A one-pot synthesis of functionalized ethyl 1,3-thiazole-5-carboxylates from thioamides or thioureas and 2-chloro-1,3-dicarbonyl compounds in an ionic liquid**, 2009, *Monatshefte fur Chemie* 140 (2), pp. 209-211

## 2008

- Yavari, I., Seyfi, S., Hossaini, Z., Sabbaghan, M., Shirgahi-Talari, F. **Efficient synthesis of 2-thioxo-1,3-thiazolanes from primary amines, CS<sub>2</sub>, and ethyl bromopyruvate**, 2008, *Monatshefte fur Chemie* 139 (12), pp. 1479-1482 ,  
Yavari, I., Karimi, E., **Tandem synthesis of functionalized tetrahydro-4aH-benzo[c]isoquinol[1,2-t]pyrrolo[1,2-a][1,6]naphthyridines**, 2008, *Tetrahedron Letters* 49 (45), pp. 6433-6436  
Yavari, I., Hossaini, Z., Seyfi, S., Shirgahi-Talari, F. **Efficient synthesis of highly substituted thiophenes from acetylenic esters, ethyl bromopyruvate, and tetramethylthiourea**, 2008, *Monatshefte fur Chemie* 139 (10), pp. 1257-1259 ,  
Yavari, I., Kowsari, E., **Ionic liquids as green and recyclable solvents for the synthesis of N-substituted N'-aryloylthioureas containing 9,10-anthraquinone moiety**, 2008, *Journal of Sulfur Chemistry* 29 (5), pp. 529-537  
Mohtat, B., Jabbar, S., Ghasemi, A., Yavari, I., **Synthesis of alkyl 2-[2-oxopyridin-1(2H)-yl]acrylates by nucleophilic addition of alkyl propiolates catalysed by Ph<sub>3</sub>P**, 2008, *Journal of Chemical Research* (10), pp. 601-603  
Khoramabadi-Zad, A., Yavari, I., Shiri, A., Bani, A., **Oxidation of bisnaphthols to spironaphthalenones, revisited**, 2008, *Journal of Heterocyclic Chemistry* 45 (5), pp. 1351-1358  
Yavari, I., Sayyed-Alangi, S.Z., Sabbaghan, M., Hajinasiri, R., Iravani, N., **One-pot synthesis of functionalized thioureas by reaction of benzoyl isothiocyanates, secondary amines, and alkyl propiolates**, 2008, *Monatshefte fur Chemie* 139 (9), pp. 1025-1028  
Yavari, I., Hajinasiri, R., Sayyed-Alangi, S.Z., Iravani, N., **Efficient synthesis of ethyl 3-alkyl-4-oxo-2-thioxo-1,3-thiazolane-5- carboxylates from the reaction of carbon disulfide and primary amines in the presence of diethyl 2-chloromalonate**, 2008, *Monatshefte fur Chemie* 139 (9), pp. 1029-1031  
Movahedi, M., Kowsari, E., Mahjoub, A.R., Yavari, I., **A task specific basic ionic liquid for synthesis of flower-like ZnO by hydrothermal method**, 2008, *Materials Letters* 62 (23), pp. 3856-3858  
Yavari, I., Hosseini, N., Moradi, L., **An efficient synthesis of 2-cyano-2-phenyl-2,11b-dihydro-[1,3]oxazino[2,3- a]isoquinolines by reaction of isoquinoline with electron-deficient acetylenes in the presence of benzoylcyanide**, 2008, *Monatshefte fur Chemie* 139 (8), pp. 953-956  
Yavari, I., Hossaini, Z., Sabbaghan, M., **Efficient synthesis of 2,3,4-trisubstituted furans from the reaction of activated acetylenes with ethyl bromopyruvate in the presence of enaminones**, 2008, *Monatshefte fur Chemie* 139 (8), pp. 945-948  
Yavari, I., Souris, S., Sirouspour, M., **Efficient one-pot synthesis of unsymmetrical 2-thioparabanic acids from oxalyl chloride, benzoyl isothiocyanate, and primary amines**, 2008, *Synlett* (11), pp. 1633-1634 ,  
Yavari, I., Hossaini, Z., Shirgahi-Talari, F., Seyfi, S., **Synthesis of functionalized 1,3-thiazoles from acid chlorides, primary amines, ethyl bromopyruvate, and ammonium thiocyanate**, 2008, *Synlett* (11), pp. 1631-1632  
Yavari, I., Hosseini, N., Moradi, L., Mirzaei, A., **Efficient synthesis of N,N'-dialkyl-N''-dialkylaminocarbothioyl thioureas from cyclic secondary amines, CS<sub>2</sub>, and N,N'-dialkyl carbodiimides in water**, 2008, *Tetrahedron Letters* 49 (27), pp. 4239-4241  
Yavari, I., Sabbaghan, M., Hossaini, Z., **Efficient synthesis of functionalized 2,5-dihydrofurans and 1,5-dihydro-2H-pyrrol-2-ones by reaction of**

isocyanides with activated acetylenes in the presence of hexachloroacetone , 2008, *Monatshefte fur Chemie* 139 (6), pp. 625-628

Yavari, I., Sabbaghan, M., Hossaini, Z., Ghazanfarpour-Darjani, M., **Surprising formation of chlorinated butenolides from dialkyl acetylenedicarboxylates and hexachloroacetone in the presence of triphenyl phosphate**, 2008, *Helvetica Chimica Acta* 91 (6), pp. 1144-1147

Yavari, I., Hossaini, Z., Seyfi, S., Shirgahi-Talari, F., **Efficient synthesis of functionalized thiazoles from acid chlorides, tetramethylthiourea, ethyl bromopyruvate, and ammonium thiocyanate**, 2008, *Helvetica Chimica Acta* 91 (6), pp. 1177-1180

Yavari, I., Mokhtarporyani-Sanandaj, A., Moradi, L., Mirzaei, A., **Reaction of benzoyl chlorides with Huisgen's zwitterion: synthesis of functionalized 2,5-dihydro-1H-pyrroles and tetrasubstituted furans**, 2008, *Tetrahedron* 64 (22), pp. 5221-5225

Yavari, I., Hossaini, Z., Souri, S., Sabbaghan, M., **N-methylimidazole-promoted efficient synthesis of functionalized 1,3-oxazoline-2-thiones under solvent-free conditions**, 2008, *Synlett* (9), pp. 1287-1288

Yavari, I., Sabbaghan, M., Hossaini, Z. **Proline-promoted efficient synthesis of 4-aryl-3,4-dihydro-2H,5H-pyrano[3, 2-c]chromene-2,5-diones in aqueous media**, 2008, *Synlett* (8), pp. 1153-1154

Yavari, I., Souri, S., **Synthesis of functionalized 5-oxo-2,5-dihydro-1H-pyrroles from primary alkylamines, oxalyl chloride, and dimethyl acetylenedicarboxylate** , 2008, *Synlett* (8), pp. 1208-1210

Yavari, I., Mirzaei, A., Moradi, L., Hosseini, N., **Stereoselective synthesis of dialkyl 3-spiroindanedione-1,2,3,3a-tetrahydropyrrolo[1,2-a]quinoline-1,2-dicarb oxylates**, 2008, *Tetrahedron Letters* 49 (15), pp. 2355-2358

Yavari, I., Ghazanfarpour-Darjani, M., Hossaini, Z., Sabbaghan, M., Hosseini, N., **Methoxide ion promoted efficient synthesis of 1,3-oxathiolane-2-thiones by reaction of oxiranes and carbon disulfide** , 2008, *Synlett* (6), pp. 889-891

Yavari, I., Kowsari, E., **Task-specific basic ionic liquid: A reusable and green catalyst for one-pot synthesis of highly functionalized pyrroles in aqueous media**, 2008, *Synlett* (6), pp. 897-899

Yavari, I., Hosseini, N., Moradi, L., **Efficient synthesis of highly functionalized thiazolidine-4-ones under solvent-free conditions**, 2008, *Monatshefte fur Chemie* 139 (2), pp. 133-136

Yavari, I., Hossaini, Z., Sabbaghan, M., **Efficient synthesis of tetrasubstituted thiophenes by reaction of benzoyl isothiocyanates, ethyl bromopyruvate and enaminones**, 2008, *Tetrahedron Letters* 49 (5), pp. 844-846

Yavari, I., Kowsari, E., **Synthesis, spectral, and thermal properties of some phosphorus-containing 9,10-anthraquininoid, thermally stable dyes**, 2008, *Dyes and Pigments* 77 (1), pp. 103-110

Habibi, A., Mousavifar, L., Yazdanbakhsh, M.R., Yavari, I., **Synthesis of 1-(2,6-dimethylphenyl)-N-hydroxy-4,4-dialkyl-2,5-dioxo-N-aryl- 3-pyrrolidine-carboxamides from reaction of 2,6-dimethylphenyl isocyanide, alkylidene Meldrum's acids, and arylhydroxylamines**, 2008, *Synthetic Communications* 38 (6), pp. 873-880

Yavari, I., Alborzi, A.R., Mohtat, B., Nourmohammadian, F. **C-vinylation of 1,8-dihydroxyanthraquinone promoted by triphenylphosphine**, 2008, *Synthetic Communications* 38 (5), pp. 703-712

# **Students Completed Their PhD Research Under Supervision of Issa Yavari (1995-2006)**

## **A. University of Tarbiat Modares (Tehran, I.R.Iran)**

1. Dr Ahmad Shaabani (1995)
2. Dr Ali Ramazani (1996)
3. Dr Mohammad Reza Islami (1997)
4. Dr Abbas Ali Esmaili (1997)
5. Dr Robabeh Baharfar (1997)
6. Dr Sakinah Asghari (1998)
7. Dr Dariush Tahmassebi (1998)
8. Dr Afsaneh Zonouzi (1999)
9. Dr Rahim Hekmat-Shoar (1999)
10. Dr Malek Taher Maghsoodlou (1999)
11. Dr Farahnaz Nourmohammadian (2000)
12. Dr Mehdi Adib (2002)
13. Dr Nader Zabarjad-Shiraz (2002)
14. Dr Mohammad Bayat (2002)
15. Dr Mohammad Anari-Abbasinejad (2003)

16. Dr Abdolali Alizadeh (2003)
17. Dr Azizollah Habibi (2003)
18. Dr Faroogh Nasiri (2004)
19. Dr Hoorieh Djahaniani (2004)
20. Dr. Maryam Sabbaghan (2007)
21. Dr. Zinatosadat Hossaini (2008)
22. Dr. Elham Karimi (2008)
23. Dr. Elaheh Kowsari (2008)
24. Dr. Loghman Moradi (2008)
25. Dr. Sanaz Souri (2009)

### ***B. University of Shahid Beheshti (Tehran, I.R.Iran)***

1. Dr Mohammad Hossein Moslemin (1999)
2. Dr Noorollah Hazeri (2002)

### ***C. Islamic Azad University, Science & Research Campus (Tehran, I.R.Iran)***

1. Dr Mahbobe Heydari (1996)
2. Dr Davood Nori-Shargh (1997)
3. Dr Hossein Fallah-Bagher-Shaidaii (1997)
4. Dr Arman Taherpour (1997)
5. Dr Mohsen Dadgar (1998)
6. Dr Hassan Norouzi-Arasi (1998)
7. Dr Mohammad Reza Hossaini-Tabatabaei (1998)
8. Dr Katayoun Najafian (1999)
9. Dr Arash Jabbari (1999)
10. Dr Marjaneh Samadizadeh (2000)
11. Dr Vahideh Hadigheh-Rezvan (2000)
12. Dr Manzarbano Esnaashari (2001)
13. Dr Behrooz Adib (2001)
14. Dr Hassan Kabiri-Fard (2002)
15. Dr Shahram Moradi (2002)
16. Dr Mahshid Nikpour-Nezhati (2002)

17. Dr Shoaleh Dehghan (2003)
18. Dr Rahebeh Amiri (2004)
19. Dr Mina Haghadi (2004)
20. Dr Ali Reza Alborzi (2004)
21. Dr. Bita Mohtat (2005)
22. Dr. Hasan Zare (2006)
23. Dr. Safa Ali-Asgary (2007)
24. Dr. Khalil Pourshamsian (2007)
25. Dr. Mohammad Bagheri (2008)
26. Dr. Rahimeh Hajinasiri (2008)
27. Dr. S. Zahra Sayd-Alangi (2008)
28. Dr. Nasir Iravani (2009)

## **Students Completed Their MSc Research Under Supervision of Issa Yavari (1980-2003)**

Over 150 MSc students from the following Universities completed their research under supervision of *Issa Yavari*

***University of Mazandaran***

***University of Tarbiat Modares***

***University of Shahid Beheshti***

***Islamic Azad University, Tehran North Branch***

## **2010**

1. Yavari, I., Sorouspour, M., Souri, S., **Domino Michael–O-alkylation: one-pot synthesis of dialkyl 4-oxo-2,3-dihydro-2,3-furandicarboxylates (2010)** *Molecular Diversity, Article in Press.*
2. Yavari, I., Ahmadian, S., Ghazanfarpur-Darjani, M., Solgi, Y. **Formation of N-sulfonylamidines by copper-catalyzed coupling of sulfonyl azides, terminal alkynes and trialkylamines (2010)** *Tetrahedron Letters, In Press, Accepted Manuscript.*
3. Yavari, I., Mirzaei, A., Hossaini, Z., Souri, S. **Diastereoselective synthesis of fused [1,3]oxazines from ethyl pyruvate, activated acetylenes and N-heterocycles (2010)** *Molecular Diversity, 14 (2), pp. 343-347.*
4. Yavari, I., Seyfi, S., Hossaini, Z. **Formation of trialkyl quinoline-2,3,4-tricarboxylates by reaction of isatin, dialkyl acetylenedicarboxylates, and sodium O-alkyl carbonodithioates (2010)** *Tetrahedron Letters, 51 (16), pp. 2193-2194.*
5. Yavari, I., Mirzaei, A., Khalili, G. **Solvent-free synthesis of diphenyl [2-(aminocarbonyl)-1,2- dihydroisoquinolin-1-yl]phosphonates from isoquinoline, isocyanates, and diphenyl phosphonate (2010)** *Helvetica Chimica Acta, 93 (4), pp. 654-658.*
6. Yavari, I., Khalili, G., Mirzaei, A. **Tandem synthesis of 1-(alkylamino)-2,4-diarylpyrimido[6,1-a]isoquinolin-5-ium chlorides from isoquinoline, N-alkyl-benzimidoyl chlorides, and isocyanides (2010)** *Tetrahedron Letters, 51 (8), pp. 1190-1192.*
7. Yavari, I., Khalili, G., Mirzaei, A. **Cascade synthesis of functionalized 2H-imidazo[5,1-a]-isoquinolinium chlorides from isoquinoline, chloroformamidines (=carbamimidoyl chlorides), and isocyanides (2010)** *Helvetica Chimica Acta, 93 (1), pp. 72-76.*
8. Yavari, I., Khalili, G., Mirzaei, A. **One-pot synthesis of functionalized 3-aryl-1-phenyl-1H-pyrazoles from hydrazonoyl chlorides and acetylenic esters in the presence of Ph3P (2010)** *Helvetica Chimica Acta, 93 (2), pp. 277-280.*
9. Yavari, I., Nematpour, M., Hossaini, Z. **Ph3P-mediated one-pot synthesis of**

- functionalized 3,4-dihydro-2H-1,3-thiazines from N,N1-dialkylthioureas and activated acetylenes in water (2010) *Monatshefte fur Chemie*, 141 (2), pp. 229-232.**
- 10. Yavari, I., Shirgahi-Talari, F., Hossaini, Z., Sabbaghan, M., Seyfi, S. Synthesis of functionalized 1,2,4-triazole-3-thiones from ammonium isothiocyanate, acid chlorides, and arylhydrazines (2010) *Molecular Diversity*, 14 (4), pp. 763-766.**
- 11. Yavari, I., Nematpour, M., Hossaini, Z. A synthesis of phosphorylated dioxohexahydropyrimidines from N, N'-dimethylurea, activated acetylenes, and trialkyl phosphites (2010) *Molecular Diversity*, 14 (4), pp. 617-620.**
- 12. Yavari, I., Sorouspour, M., Souri, S. One-pot synthesis of functionalized 4-oxo-2-thioxo-1,3-thiazinanes from primary amines, CS<sub>2</sub>, and itaconic anhydride (2010) *Molecular Diversity*, 14 (3), pp. 611-615.**
- 13. Yavari, I., Mirzaei, A., Hossaini, Z., Souri, S. Diastereoselective synthesis of fused [1,3]oxazines from ethyl pyruvate, activated acetylenes and N-heterocycles (2010) *Molecular Diversity*, 14 (4), pp. 343-347.**
- 14. Yavari, I., Mirzaei, A., Moradi, L., Khalili, G.H., Diastereoselective synthesis of spiro-functionalized tetraalkyl benzoisoquinolopyrrolonaphthyridine-tetracarboxylates from isoquinoline, dialkyl acetylenedicarboxylates, and indane-1,3-dione (2010) *Tetrahedron Letters*, 51 (2), pp. 396-398.**
- 15. Yavari, I., Sorouspour, M., Souri, S. A one-pot synthesis of N-alkylthiazoline-2-thiones from CS<sub>2</sub>, primary amines, and 2-chloro-1,3-dicarbonyl compounds in water (2010) *Monatshefte fur Chemie*, 141 (1), pp. 49-52.**

## **2009**

- 16. Yavari, I., Hossaini, Z., Souri, S., Seyfi, S., Diastereoselective synthesis of fused [1,3]thiazolo[1,3]oxazins and [1,3]oxazino[2,3-b][1,3]benzothiazoles (2009) *Molecular Diversity*, 13 (4), pp. 439-443.**
- 17. Yavari, I., Kowsari, E. Efficient and green synthesis of tetrasubstituted pyrroles promoted by task-specific basic ionic liquids as catalyst in aqueous media (2009) *Molecular Diversity*, 13 (4), pp. 519-528.**
- 18. Yavari, I., Bayat, M. J., Souri, S., Sorouspour, M., One-pot synthesis of functionalized (4-oxo-1,3-thiazinan-5-yl)acetic acids from isothiocyanates, primary alkylamines, and itaconic anhydride (2009) *Helvetica Chimica Acta*, 92 (9), pp. 1903-1907.**
- 19. Yavari, I., Hossaini, Z., Sabbaghan, M., Ghazanfarpour-Darjani, M. A one-pot synthesis of functionalized thiazoles from acid chlorides, secondary amines, ethyl bromopyruvate, and ammonium thiocyanate (2009) *Molecular Diversity*, 13 (3), pp. 295-300.**
- 20. Yavari, I., Yavari, P., Kowsari, E. Ionic liquids as novel reaction media for the synthesis of copoly(ester-amide)s containing 9,10-Anthraquinone moiety (2009) *Synthetic Communications*, 39 (14), pp. 2540-2548.**
- 21. Yavari, I., Souri, S., Sorouspour, M., Bayat, M. J., An efficient synthesis of functionalized 6,10-dioxo-6,10-dihydro-5H-pyrido[1,2-a]quinoxalines and 6,10-dioxo-6,10-dihydropyrido[2,1-c][1,4] benzoxazines (2009) *Synlett*, (12), pp. 1921-1922**
- 22. Yavari, I., Mahjoub, A.R., Kowsari, E., Movahedi, M., Synthesis of ZnO nanostructures with controlled morphology and size in ionic liquids (2009) *Journal of Nanoparticle Research*, 11 (4), pp. 861-868.**

23. Yavari, I., Karimi, E., N-hydroxyphthalimide-catalyzed oxidative production of phthalic acids from xylenes using O<sub>2</sub>/HNO<sub>3</sub> in an ionic liquid (2009) *Synthetic Communications*, 39 (19), pp. 3420-3427.
24. Yavari, I., Piltan, M., Moradi, L., Synthesis of pyrrolo[2,1-a]isoquinolines from activated acetylenes, benzoylnitromethanes, and isoquinoline (2009) *Tetrahedron*, 65 (10), pp. 2067-2071.
25. Yavari, I., R. Hajinasiri, R., Sayyed-Alangi, S.Z., A synthesis of diethyl alkylsulfanyl methylmalonates catalyzed by KOH in an ionic liquid (2009) *Monatshefte fur Chemie*, 140 (2), pp. 205-207.
26. Yavari, I., Sayyed-Alangi, S.Z., Hajinasiri, R., Sajjadi-Ghotbabadi, H., A one-pot synthesis of functionalized ethyl 1,3-thiazole-5-carboxylates from thioamides or thioureas and 2-chloro-1,3-dicarbonyl compounds in an ionic liquid (2009) *Monatshefte fur Chemie*, 140 (2), pp. 209-211
27. Yavari, I., Iravani N., Sayyed-Alangi, S.Z., Hajinasiri, R., A one-pot synthesis of alkyl acylcarbamodithioates from acid chlorides, thiols, and ammonium thiocyanate, 2009, *Monatshefte fur Chemie*, 140 (10), pp. 1199-1204.
28. Yavari, I., R. Hajinasiri, R., Sayyed-Alangi, S.Z. Iravani N., An Efficient Synthesis of Dialkyl 2-(Diphenoxypyrophoryl)-3-(alkylthio)succinates from Alkylthiols, Triphenyl Phosphite and Dialkyl Acetylenedicarboxylates (2009) *Journal of Iranian Chemical Society*, Vol. 6, No. 4, pp. 705-709.