

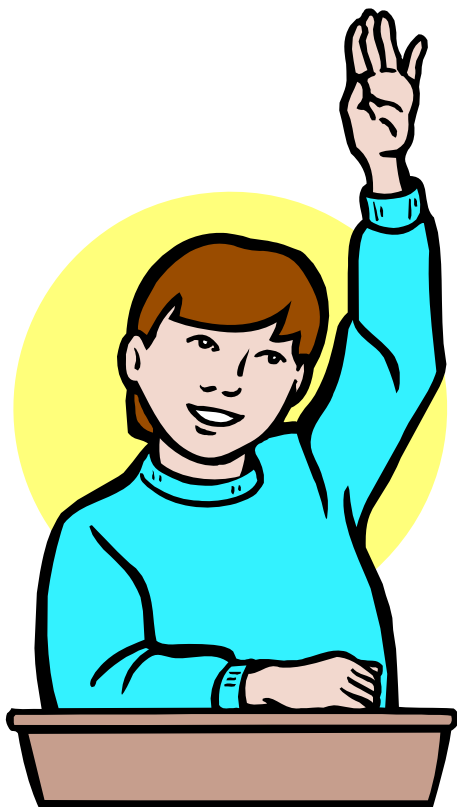


SciFinder Scholar Chemical Properties Practice Questions

Practice questions

1. The cholesterol drug Zetia has been in the news recently:
 - Find its substance record and review its experimental and predicted properties
 - Retrieve references associated with adverse effects
 - Use the Categorize feature to review the various categories
2. Review the three different spectral sources for MTBE
3. Search the alloy Co_2FeSi by Molecular Formula, review substance detail and properties, then locate references associated with spin polarization

Practice question answers



For the following questions:
Note searches were done on 1-15-08, due to the daily updating of SciFinder Scholar research results may vary when done in the future.

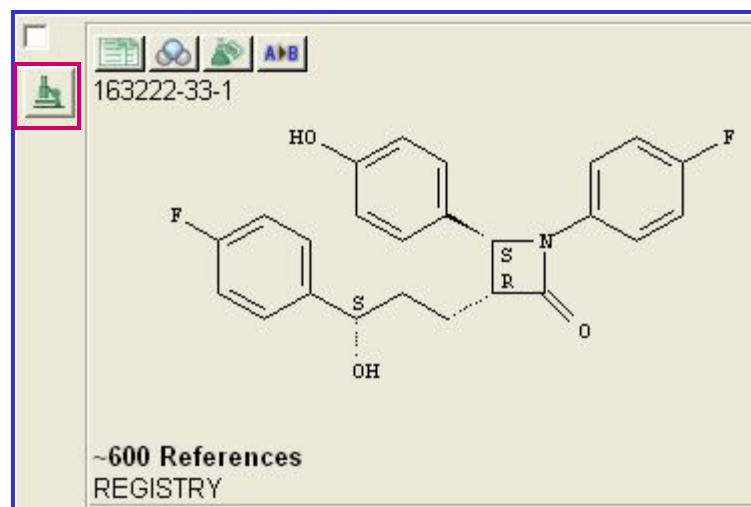
1. Find the Zetia substance record and review its experimental and predicted properties

Use Locate by Substance Identifier: Zetia

Click on Microscope icon for substance detail

Review property detail

Click Reference icon



Detail of Substance 1

File Edit Help

Registry Number: 163222-33-1

Absolute stereochemistry. Rotation (-).

Formula: C₂₄ H₂₁ F₂ N O₃

CA Index Name: 2-Azetidinone, 1-(4-fluorophenyl)-3-[(3S)-3-(4-fluorophenyl)-3-hydroxypropyl]-4-(4-hydroxyphenyl)-, (3R,4S)-

Other Names: 2-Azetidinone, 1-(4-fluorophenyl)-3-[3-(4-fluorophenyl)-3-hydroxypropyl]-4-(4-hydroxyphenyl)-, [3R-[3α(S*),4β]]; (-)-Sch 58235; Ezedoc; Ezetimibe; Ezetrol; Ezta; Sch 58235; Zetia

[Experimental Properties](#)
[Predicted Properties](#)

-- Resources --

Retrieve Zetia references associated with adverse effects

The screenshot displays the SciFinder Scholar interface. On the left, the 'Get References' dialog box is open, showing search criteria for 'Zetia'. The 'References associated with:' section has 'Adverse Effect, including Toxicity' checked. The 'Analyze/Refine' button is highlighted with a red box. The main window shows a list of references, with the 'Analyze/Refine' button also highlighted in the bottom toolbar.

Get References

For this substance, retrieve:

All references References associated with:

- Adverse Effect, including Toxicity
- Analytical Study
- Biological Study
- Combinatorial Study
- Crystal Structure
- Formation, nonpreparative
- Miscellaneous
- Occurrence
- Preparation
- Process
- Properties
- Reactant or Reagent
- Spectral Properties
- Uses

For each **sequence**, retrieve:

Additional related references, e.g., activity studies, disease studies.

OK **Back**

SciFinder Scholar

File Edit View Task Tools Help

Teramoto, Tamio. **Ezetimibe**. Cardiac Practice (2007), 18(4), 409-411. CODEN: CARPDE

Constance, C.; Westphal, S.; Chung, N.; Lund, M.; Sisk, C. McCrary, Johnson-Levonas, A. **Atorvastatin 20 mg in patients with type 2 diabetes mellitus**. Diabetes, Obesity and Metabolism (2007), 10(1), 1-11. CODEN: DIOBDE

Yamashita, Shizuya. **Inhibitors of lipid absorption**. Sogo Rinsho (2007), 56(7), 2286-2291. CODEN: SORINR

McKenney, James M.; Jones, Peter H.; Bays, Harold E.; Knopp, Robert H.; Kashyap, Moti L. **Atorvastatin and extended-release niacin or ezetimibe versus a statin alone (the COMPELL)**. Current Medical Research and Opinion (2007), 23(4), 767-775. CODEN: CMROCX

Blagden, M. D.; Chipperfield, R. **Efficacy and safety of ezetimibe co-administered with a statin**. Current Medical Research and Opinion (2007), 23(4), 767-775. CODEN: CMROCX

Tatley, Michael; Savage, Ruth. **Psychiatric adverse reactions with statins, fibrates and ezetimibe**. Current Medical Research and Opinion (2007), 23(4), 767-775. CODEN: CMROCX

Feldman, Theodore; Ose, Leiv; Shah, Arvind; Zakson, Michelle; Meehan, Alan; Johnson-Levonas, A. **Ezetimibe/simvastatin versus simvastatin monotherapy in hypercholesterolemic patients (the COMPELL)**. Current Medical Research and Opinion (2007), 23(4), 767-775. CODEN: CMROCX

Moon, Yong S. K.; Chun, Patricia; Chung, Suna. **Ezetimibe and fenofibrate combination therapy**. Current Medical Research and Opinion (2007), 23(4), 767-775. CODEN: CMROCX

Jacobson, Terry A.; Armani, Annemarie; McKenney, James M.; Guyton, John R. **Safety and efficacy of ezetimibe/simvastatin combination therapy**. Current Medical Research and Opinion (2007), 23(4), 767-775. CODEN: CMROCX

Weffald, Linda A.; Flach, Lynn A. **Myopathy associated with atorvastatin-ezetimibe combination therapy**. Pharmacotherapy (2007), 27(2), 309-311. CODEN: PHPYDQ

Ballantyne, Christie M.; Weiss, Robert; Moccetti, Tiziano; Vogt, Anja; Eber, Bernd; Sosef, Froukje; Duffield, Emma. **Efficacy and Safety of Rosuvastatin 40 mg Alone or in Combination With Ezetimibe in Patients at High Risk of Cardiovascular Disease (Results from the EXPLORER Study)**. American Journal of Cardiology (2007), 99(5), 673-680. CODEN: AJCDAG

Efrati, S.; Averbukh, M.; Dishy, V.; Faygenzo, M.; Friedensohn, L.; Golik, A. **The effect of simvastatin, ezetimibe and their combination on the lipid profile, arterial stiffness and inflammatory markers**. European Journal of Clinical Pharmacology (2007), 63(2), 113-121. CODEN: EJCPLS

Walsky, Robert L.; Astuccio, Angela V.; Obach, Scott. **Evaluation of 227 drugs for in vitro inhibition of cytochrome P450 2B6**. Journal of Clinical Pharmacology (2006), 46(12), 1426-1438. CODEN: JCPHBR

Bissonnette, Stephane; Habib, Rafik; Sampalis, Fotini; Boukas, Stella; Sampalis, John S. **Efficacy and tolerability of ezetimibe 10 mg/day coadministered with statins in patients with primary hypercholesterolemia who do not achieve target LDL-C while on statin monotherapy: A Canadian, multicentre, prospective study - the Ezetrol add-on study**. Canadian Journal of Cardiology (2006), 22(12), 1035-1044. CODEN: CJCACX

Remove Duplicates **Analyze/Refine** Get Related... Back

References 1-15 of 199



Use the Categorize feature to review the various categories

The screenshot shows the 'Categorize' window in SciFinder. It features a menu bar with 'File', 'Edit', 'Task', 'Tools', and 'Help'. The main area is divided into two columns: 'Select categories of interest' and 'Select terms of interest'. Each column has a list of items with a radio button and a 'Reference Count' column. The 'General science topics' category is selected in the left column. The 'Treatment Outcome' term is selected in the right column. At the bottom, there are three buttons: 'Get References', 'Review Selected Terms', and 'Back'. A status bar at the very bottom indicates 'Histogram Entries 1-14 of 38'.

Select categories of interest:	Reference Count	Select terms of interest:	Reference Count
General chemistry		<input type="checkbox"/> Treatment Outcome	27
<input type="radio"/> Organic substances	199	<input type="checkbox"/> Double-Blind Method	23
<input checked="" type="radio"/> General science topics	60	<input type="checkbox"/> Risk Factors	9
<input type="radio"/> Miscellaneous substances	7	<input type="checkbox"/> Clinical Trials	7
<input type="radio"/> Inorganic substances	2	<input type="checkbox"/> Retrospective Studies	6
Biology		<input type="checkbox"/> Cross-Over Studies	4
<input type="radio"/> Substances in biology	196	<input type="checkbox"/> Age Factors	3
<input type="radio"/> Substances in adverse effects	188	<input type="checkbox"/> Patient Compliance	3
<input type="radio"/> Animal pathology	145	<input type="checkbox"/> Practice Guidelines	3
<input type="radio"/> Processes & systems	92	<input type="checkbox"/> Algorithm	2
<input type="radio"/> Anatomy	39	<input type="checkbox"/> Area Under Curve	2
<input type="radio"/> Endocrinology	6	<input type="checkbox"/> Clinical Trials, Phase III	2
<input type="radio"/> Immunology	6	<input type="checkbox"/> Drug Approval	2
<input type="radio"/> Organisms	5	<input type="checkbox"/> Follow-Up Studies	2

No terms selected

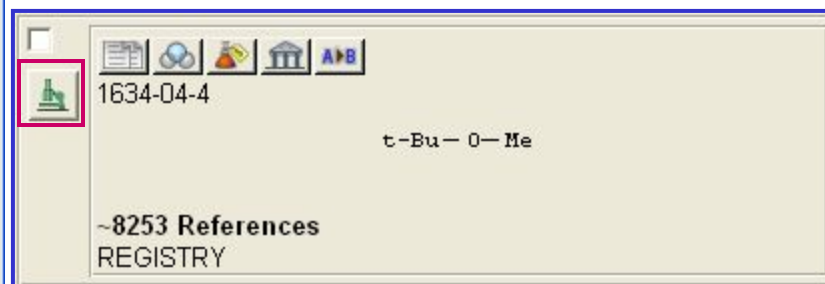
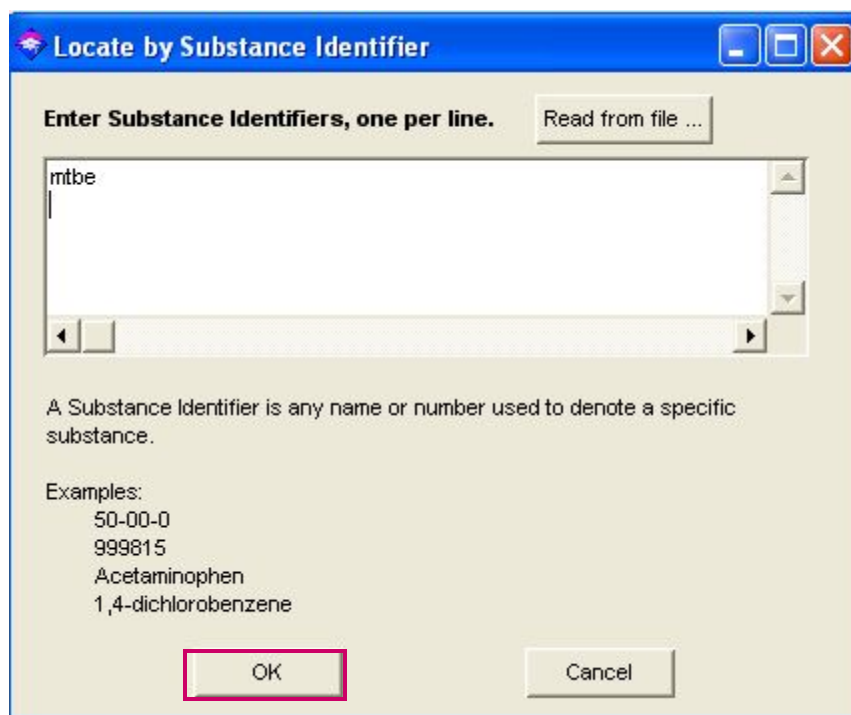
Get References Review Selected Terms Back

Histogram Entries 1-14 of 38

2. Review the three different sources of spectral data for MTBE

Use Locate by Substance Identifier: MTBE

Click on Microscope icon for substance detail



3. Search the alloy Co_2FeSi by Molecular Formula, review substance detail and properties

Explore by Molecular Formula

Enter the molecular formula of the substance.

Examples:
H4SiO4
H4O4Si
H4 Si O4

Detail of Substance 1

File Edit Help

Registry Number: 63144-33-2

Component Registry Number: 7440-48-4
Formula: Co

Component Registry Number: 7440-21-3
Formula: Si

Component Registry Number: 7439-89-6
Formula: Fe

Formula: Co . Fe . Si

CA Index Name: Cobalt iron silicide (Co_2FeSi)

Alternate Formula: Co_2FeSi

Class Identifier: Tabular Inorganic

[Experimental Properties](#)

-- Resources --

References: ~68

63144-33-2

Tabular Inorganic Substance

Component Number 1	Co
Component Number 2	Si
Component Number 3	Fe

~68 References
REGISTRY



Review alloy Co₂FeSi properties

Able to find reliable property data with references.

Experimental Properties for 63144-33-2			
File Edit Help			
(Magnetooptical)			
Magnetic Anisotropy	See full text		(7) CAS
Magnetic Coercivity	See full text		(6) CAS
Magnetic Coercivity	See full text		(8) CAS
Magnetic Moment	6.1 muB	Temp: Room Temp.	(9) CAS
Magnetic Moment	5.97 muB	Temp: 5 K	(1) CAS
Magnetic Moment	5.97 muB	Temp: 5 K	(3) CAS
Magnetic Moment	See full text		(10) CAS
Magnetic Moment	See full text		(11) CAS
Magnetization	See full text		(1) CAS
Magnetization	See full text		(3) CAS
Magnetization	See full text		(7) CAS
Magnetization	See full text		(5) CAS
Magnetization	See full text		(6) CAS
Magnetization	See full text		(8) CAS
Magnetization	See full text		(12) CAS
Magnetization	See full text		(10) CAS
Magnetization	See full text		(13) CAS
Mossbauer Spectrum	See full text		(11) CAS
Photoelectron Spectrum	See full text		(14) CAS
Photoelectron Spectrum	See full text		(15) CAS
Photoelectron Spectrum	See full text		(16) CAS
Photoelectron Spectrum	See full text		(17) CAS
Remanence	See full text		(6) CAS
X-Ray Absorption Spectrum	See full text		(1) CAS
X-Ray Diffraction Pattern	See full text		(4) CAS
X-Ray Diffraction Pattern	See full text		(1) CAS
X-Ray Diffraction Pattern	See full text		(5) CAS
X-Ray Diffraction Pattern	See full text		(8) CAS
X-Ray Diffraction Pattern	See full text		(13) CAS
X-Ray Spectrum	See full text		(4) CAS

Notes:
 (1) Wurmehl, Sabine; *Applied Physics Letters* 2006, V88(3), P032503/1-032503/3
 (2) Chen, Xing-Qiu; *Journal of Applied Physics* 2006, V100(11), P113901/1-113901/4
 (3) Wurmehl, Sabine; *Journal of Applied Physics* 2006, V99(8, Pt. 3), P08J103/1-08J103/3

Locate references associated with spin polarization

Retrieve the 68 references

Refine by research topic – yields 18 references after removing duplicates

The image shows a screenshot of the SciFinder software interface. The main window is titled "Analyze or Refine" and "Refine References". The "Refine References" window is active, showing a "Refine By:" section with several options: Research Topic, Company Name, Author Name, Publication Year, Document Type, Language, and Database. The "Research Topic" option is selected, and a dialog box titled "Refine by Research Topic" is open. This dialog box contains a text input field with the text "spin polarization" and a list of examples: "The effect of antibiotic residues on dairy products", "Photocyanation of aromatic compounds", and "Hydrocarbon-water emulsions as fuels". The "OK" button is highlighted.

Analyze or Refine

Select One:

- Analyze: Get histograms of the
- Refine: Go to refine options w
- Categorize: Organize references k

Refine References

Refine By:

- Research Topic: Limit to literature relevant to a topic of interest.
- Company Name: Limit to literature from a specific organization.
- Author Name: Limit to literature written by a specific author.
- Publication Year: Limit to literature from
- Document Type: Limit to only Patents, Journals, or other types.
- Language: Limit to literature written in specific languages.
- Database: Limit to literature from specific databases.

Refine by Research Topic

Describe your topic using a phrase.

I am interested in:

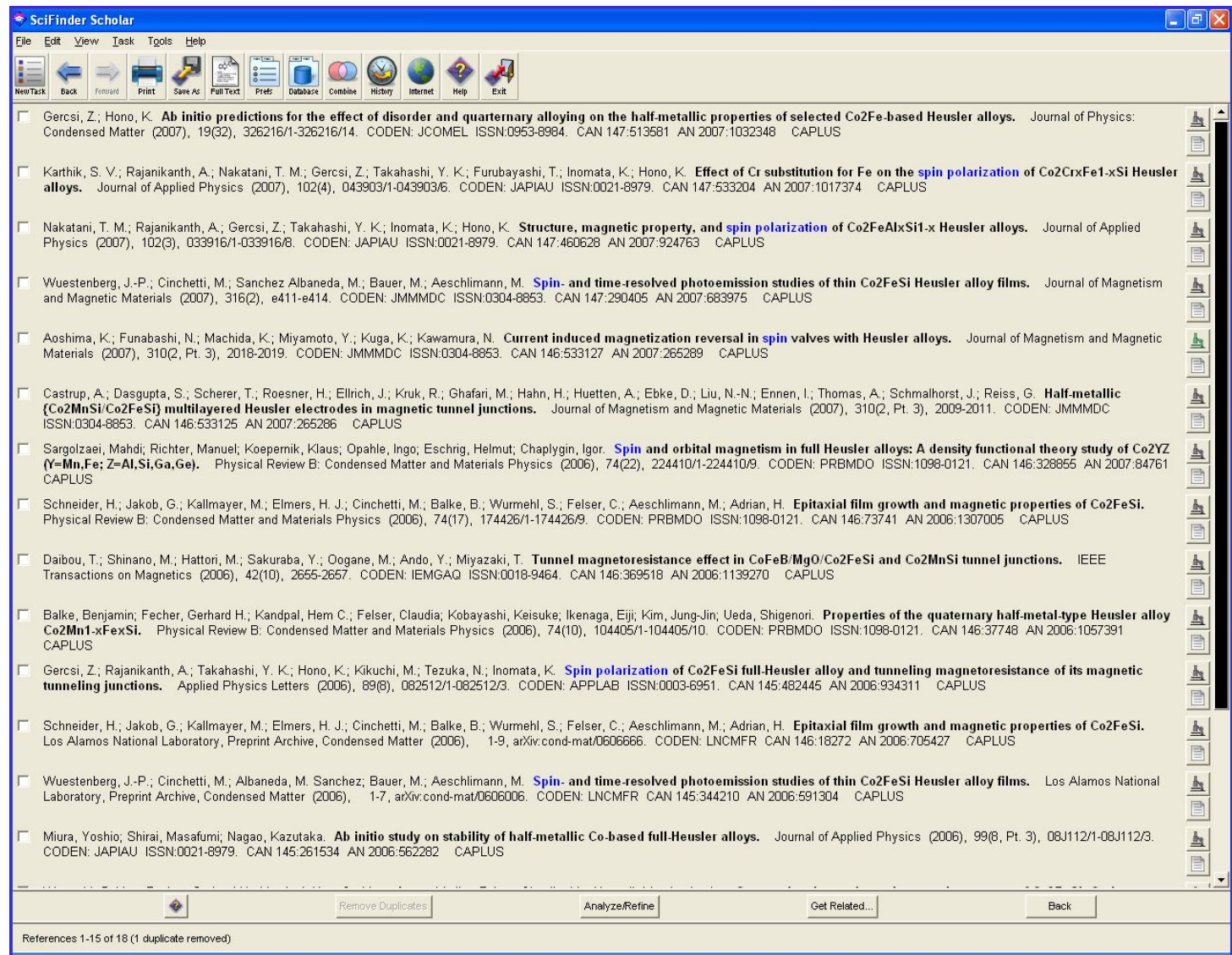
spin polarization

Examples:

- The effect of antibiotic residues on dairy products
- Photocyanation of aromatic compounds
- Hydrocarbon-water emulsions as fuels

OK Cancel

18 references are retrieved related to spin polarization after removing duplicates



SciFinder Scholar

File Edit View Task Tools Help

Back Forward Print Save As Full Text Prefetch Database Combine History Internet Help Exit

Gercsi, Z.; Hono, K. **Ab initio predictions for the effect of disorder and quaternary alloying on the half-metallic properties of selected Co₂Fe-based Heusler alloys.** Journal of Physics: Condensed Matter (2007), 19(32), 326216/1-326216/14. CODEN: JCOMEL ISSN:0953-8984. CAN 147:513581 AN 2007:1032348 CAPLUS

Karthik, S. V.; Rajanikanth, A.; Nakatani, T. M.; Gercsi, Z.; Takahashi, Y. K.; Furubayashi, T.; Inomata, K.; Hono, K. **Effect of Cr substitution for Fe on the spin polarization of Co₂CrxFe_{1-x}Si Heusler alloys.** Journal of Applied Physics (2007), 102(4), 043903/1-043903/6. CODEN: JAPIAU ISSN:0021-8979. CAN 147:533204 AN 2007:1017374 CAPLUS

Nakatani, T. M.; Rajanikanth, A.; Gercsi, Z.; Takahashi, Y. K.; Inomata, K.; Hono, K. **Structure, magnetic property, and spin polarization of Co₂FeAlxSi_{1-x} Heusler alloys.** Journal of Applied Physics (2007), 102(3), 033916/1-033916/8. CODEN: JAPIAU ISSN:0021-8979. CAN 147:460628 AN 2007:924763 CAPLUS

Wuestenberg, J.-P.; Cinchetti, M.; Sanchez Albaneda, M.; Bauer, M.; Aeschlimann, M. **Spin- and time-resolved photoemission studies of thin Co₂FeSi Heusler alloy films.** Journal of Magnetism and Magnetic Materials (2007), 316(2), e411-e414. CODEN: JMMMDC ISSN:0304-8853. CAN 147:290405 AN 2007:683975 CAPLUS

Aoshima, K.; Funabashi, N.; Machida, K.; Miyamoto, Y.; Kuga, K.; Kawamura, N. **Current induced magnetization reversal in spin valves with Heusler alloys.** Journal of Magnetism and Magnetic Materials (2007), 310(2, Pt. 3), 2018-2019. CODEN: JMMMDC ISSN:0304-8853. CAN 146:533127 AN 2007:265289 CAPLUS

Castrop, A.; Dasgupta, S.; Scherer, T.; Roesner, H.; Ellrich, J.; Kruk, R.; Ghafari, M.; Hahn, H.; Huettner, A.; Ebke, D.; Liu, N.-N.; Ennen, I.; Thomas, A.; Schmalhorst, J.; Reiss, G. **Half-metallic (Co₂MnSi/Co₂FeSi) multilayered Heusler electrodes in magnetic tunnel junctions.** Journal of Magnetism and Magnetic Materials (2007), 310(2, Pt. 3), 2009-2011. CODEN: JMMMDC ISSN:0304-8853. CAN 146:533125 AN 2007:265286 CAPLUS

Sargolzaei, Mahdi; Richter, Manuel; Koepf, Klaus; Opahle, Ingo; Eschrig, Helmut; Chaplygin, Igor. **Spin and orbital magnetism in full Heusler alloys: A density functional theory study of Co₂YZ (Y=Mn,Fe; Z=Al,Si,Ga,Ge).** Physical Review B: Condensed Matter and Materials Physics (2006), 74(22), 224410/1-224410/9. CODEN: PRBMDO ISSN:1098-0121. CAN 146:328855 AN 2007:84761 CAPLUS

Schneider, H.; Jakob, G.; Kallmayer, M.; Elmers, H. J.; Cinchetti, M.; Balke, B.; Wurmehl, S.; Felser, C.; Aeschlimann, M.; Adrian, H. **Epitaxial film growth and magnetic properties of Co₂FeSi.** Physical Review B: Condensed Matter and Materials Physics (2006), 74(17), 174426/1-174426/9. CODEN: PRBMDO ISSN:1098-0121. CAN 146:73741 AN 2006:1307005 CAPLUS

Daibou, T.; Shinano, M.; Hattori, M.; Sakuraba, Y.; Oogane, M.; Ando, Y.; Miyazaki, T. **Tunnel magnetoresistance effect in CoFeB/MgO/Co₂FeSi and Co₂MnSi tunnel junctions.** IEEE Transactions on Magnetics (2006), 42(10), 2655-2657. CODEN: IEMGAQ ISSN:0018-9464. CAN 146:369518 AN 2006:1139270 CAPLUS

Balke, Benjamin; Fecher, Gerhard H.; Kandpal, Hem C.; Felser, Claudia; Kobayashi, Keisuke; Ikenaga, Eiji; Kim, Jung-Jin; Ueda, Shigenori. **Properties of the quaternary half-metal-type Heusler alloy Co₂Mn_{1-x}Fe_xSi.** Physical Review B: Condensed Matter and Materials Physics (2006), 74(10), 104405/1-104405/10. CODEN: PRBMDO ISSN:1098-0121. CAN 146:37748 AN 2006:1057391 CAPLUS

Gercsi, Z.; Rajanikanth, A.; Takahashi, Y. K.; Hono, K.; Kikuchi, M.; Tezuka, N.; Inomata, K. **Spin polarization of Co₂FeSi full-Heusler alloy and tunneling magnetoresistance of its magnetic tunneling junctions.** Applied Physics Letters (2006), 89(8), 082512/1-082512/3. CODEN: APPLAB ISSN:0003-6951. CAN 145:482445 AN 2006:934311 CAPLUS

Schneider, H.; Jakob, G.; Kallmayer, M.; Elmers, H. J.; Cinchetti, M.; Balke, B.; Wurmehl, S.; Felser, C.; Aeschlimann, M.; Adrian, H. **Epitaxial film growth and magnetic properties of Co₂FeSi.** Los Alamos National Laboratory, Preprint Archive, Condensed Matter (2006), 1-9, arXiv:cond-mat/0606666. CODEN: LNCMFR CAN 146:18272 AN 2006:705427 CAPLUS

Wuestenberg, J.-P.; Cinchetti, M.; Albaneda, M. Sanchez; Bauer, M.; Aeschlimann, M. **Spin- and time-resolved photoemission studies of thin Co₂FeSi Heusler alloy films.** Los Alamos National Laboratory, Preprint Archive, Condensed Matter (2006), 1-7, arXiv:cond-mat/0606006. CODEN: LNCMFR CAN 145:344210 AN 2006:591304 CAPLUS

Miura, Yoshio; Shirai, Masafumi; Nagao, Kazutaka. **Ab initio study on stability of half-metallic Co-based full-Heusler alloys.** Journal of Applied Physics (2006), 99(8, Pt. 3), 08J112/1-08J112/3. CODEN: JAPIAU ISSN:0021-8979. CAN 145:261534 AN 2006:562282 CAPLUS

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References 1-15 of 18 (1 duplicate removed)